YACHTING

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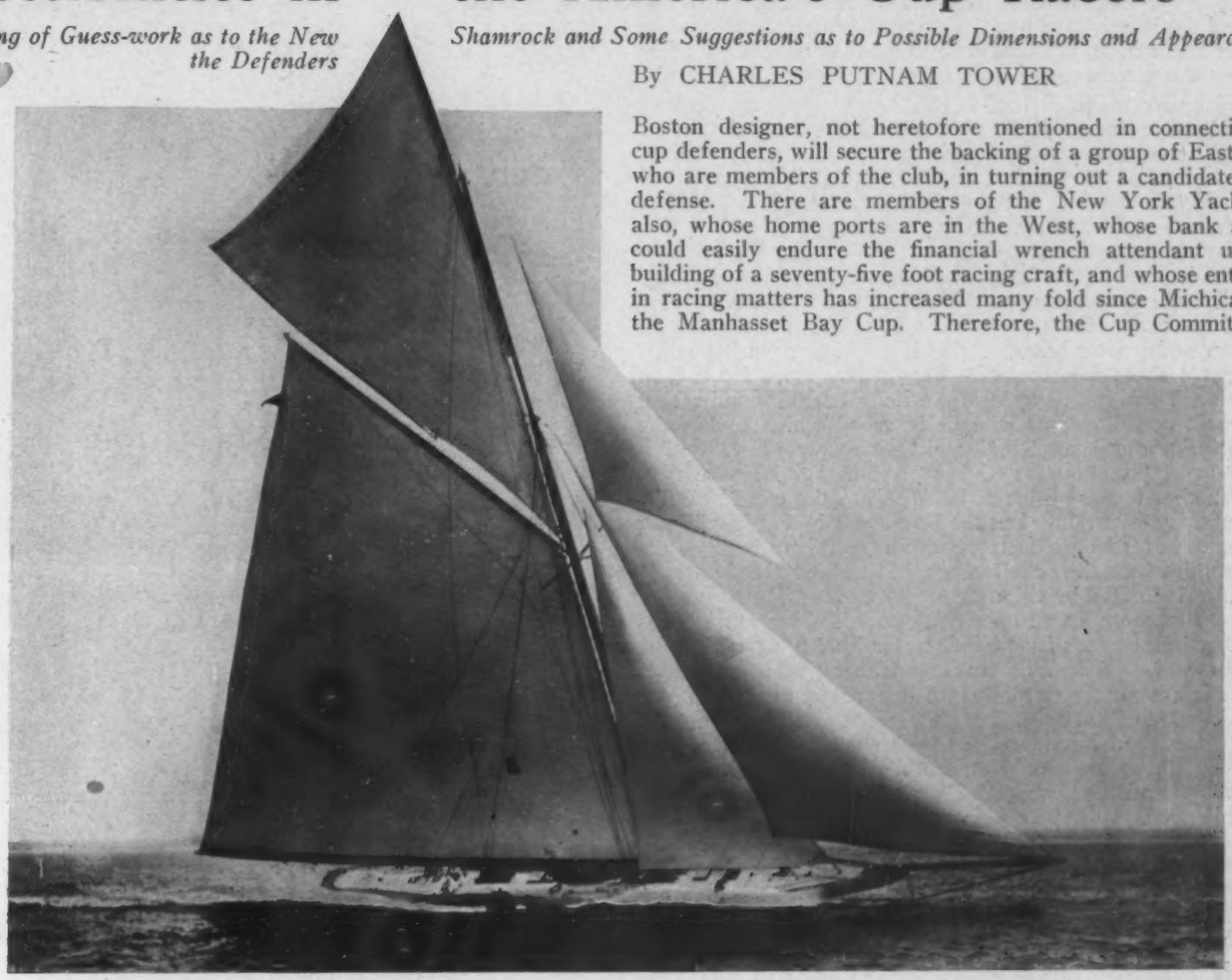
Possibilities in the America's Cup Racers

Something of Guess-work as to the New Shamrock and Some Suggestions as to Possible Dimensions and Appearance of the Defenders

By CHARLES PUTNAM TOWER



RELIANCE, THE LAST DEFENDER, WITH HER 16,000 SQUARE FEET OF SAIL AND A CLUB TOPSAIL NEARLY TWO-THIRDS AS LARGE AS THE MAINSAIL

SINCE the acceptance by the New York Yacht Club of the challenge issued by the Royal Ulster Yacht Club on behalf of Sir Thomas Lipton, for a series of races for the America's Cup, to be sailed in September next, the interesting question in the mind of American yachtsmen has been: "What sort of a boat will be put forward as a defender?" Plans for two candidates for the place of defender have already been adopted. What they are like is known only to the Herreshoff establishment, which is to build one of the craft; to William Gardner, who has designed the other, to the yachtsmen who are to pay the bills, and to a very small group of members of the New York Yacht Club who are especially active in racing, and naturally none of these will tell what he knows.

Probably the committee whose duty it will be to select a defender next summer, will have more than two boats to consider. Two syndicates, other than the one which has already placed an order with Herreshoff for a boat, are spoken of as possible, and it is generally supposed that both, if they are formed, will endeavor to persuade Nat Herreshoff to break the rule he made for himself twenty years ago, to confine his attention to one defender in any one year. There is something more than a chance that a Boston designer, not heretofore mentioned in connection with cup defenders, will secure the backing of a group of Eastern men who are members of the club, in turning out a candidate for the defense. There are members of the New York Yacht Club, also, whose home ports are in the West, whose bank accounts could easily endure the financial wrench attendant upon the building of a seventy-five foot racing craft, and whose enthusiasm in racing matters has increased many fold since Michicago won the Manhasset Bay Cup. Therefore, the Cup Committee may have any number of candidates, from one to six, from which to select a defender, and doubtless will have at least three. But for the purpose of making a guess as to what sort of a boat the defender will be, we may as well keep in mind the boat the construction of which has already been begun by Herreshoff.

Before guessing at a defender, let us have a look across the water and see if we can "make a stab" at the challenger. It is a little easier to start guessing with the new Shamrock, for one dimension of Sir Thomas's new boat is already fixed, while there is no "base line" on the defender. The challenge definitely fixes the load water line of the Lipton yacht at 75 feet, and 75 feet it will be, neither more nor less, other than a very small fraction, perhaps, when the boat is in trim, ready for measurement. Such being the case, several other dimensions may be determined with some degree of accuracy, because of the fact that the boats will be measured for the purpose of calculating time allowance under the rules of the New York Yacht Club, "as the same now exist."

The rules stipulate that the rating of a yacht shall be 18 per cent of the product of the length multiplied by the square root of sail area divided by the cube root of displacement. But there are certain limitations and penalties to be

A HAND BRUSH, THREE OF THE LONG ISLAND SOUND STAR CLASS. SMALL ONE-DESIGN CLASSES ARE BECOMING VERY POPULAR, AND MUCH OF THE RENEWED INTEREST IN YACHTING CAN BE

taken into consideration, in connection with these three factors. Along with load water line length, there is the quarter beam length with which to reckon. Quarter beam length is measured "in a line parallel with the middle fore and aft vertical plane, at a distance from it equal to one quarter of the load water line breadth, and one-tenth of this breadth above the load water line plane," and the length used in calculating the measurement is the load water line length, plus one-half the excess of quarter beam length over the percentage of the load water line length given by the formula; percentage $= 100 - \sqrt{\text{L. W. L.}}$ The square root of the load water line of 75 feet being 8.66, the limit of quarter beam length to escape penalty will be 91.34 per cent of 75 feet, or 68.50 feet. For any excess, one-half of it will be added to the length factor. That is, if the quarter beam length is found to be 69 feet, the length factor will be 75.25 feet.

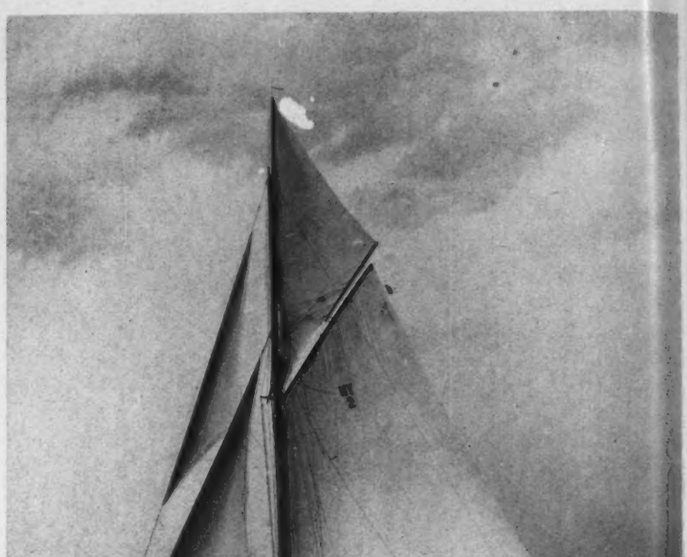
Now, the object of limiting, or penalizing, quarter beam length is to prohibit excessively long overhangs and abnormal scow bows, and in the furtherance of this object there are severe penalties against concave lines or surfaces at or about the points of measurement of quarter beam, so that if a designer pinches in his form to get a short measurement, he will pay more for it than he will gain. There is one yacht in the Long Island Sound racing fleet, a yacht new this year, the designer of which took some liberties with quarter beam length and "got away with it," in that that boat proved the fastest of her class in spite of the penalties. Whether the Englishman is "wise" to the record of this yacht or not, is a question. But the best guess is that he will not incur penalty in his length factor. Assuming this to be true, the over all length of the new challenger will be about 108 feet.

Draft also is limited by the measurement rule. It may not be without penalty, more than 16 per cent of the load water line, plus 1.75 feet, or in the case of a 75 foot water line, 13.75 feet. The penalty for excess of draft is particularly heavy, as three times the excess is added, not to the length factor, but to the ultimate rating. Four inches excess of draft, therefore, would increase the rating one foot, and this increase would on a yacht of the size under consideration make a difference in time allowance of about 1¼ seconds per mile, or considerably more than half a minute in a thirty-mile race.

There is no penalty on displacement, excepting in this; that any excess of displacement over the limit fixed is not taken into consideration in the calculation. The limit is that the cube root of displacement as used in the measurement formula, shall not exceed 20 per cent of the load water line, plus .50. The limit of the cube root of displacement of the challenger to be used in calculating measurement will be, therefore, 15.50. The Englishman will probably take the limit, because displacement figures as a divisor in the formula, and the greater the displacement up to the limit, the less will be the ultimate rating, and a nice consideration of speed possibilities on the one hand, and rating on the other, will probably lead to the conclusion that the limit is a safe figure. He certainly will not go beyond the limit, because he would have nothing to gain in rating, and he would probably lose in speed.

We can assume, therefore, that the cube root of displacement will be practically 15.5 and the displacement about 3723 cubic feet. These figures of length, draft and displacement indicate a beam of approximately 22 feet.

In the matter of sail area, the Englishman will probably bear in mind the fact that the majority of cup races in the past thirty years have been sailed in light weather, and will give his boat a pretty big spread of canvas. The sail area of Reliance, measured under the rule in force ten years ago, was 16,170 square feet. Actually it was probably slightly more, as the rule for measuring sail at that time was of such nature that it was possible to get in a few square feet that were not accounted for in the measurement. The sail area of Shamrock III was 14,154 square feet, by the same method of measurement. Doubtless the additional area of sail carried by Reliance gained for her in speed more than it lost to her in the matter of time allowance, and as sail area is a factor concerning which the designer may take some chances with



SAMURI, ONE OF THE NEW 50-FOOTERS, THE LATEST DEVELOPMENT UNDER THE UNIVERSAL RULE. IT IS POSSIBLE THAT THE DEFENDERS MAY RESEMBLE THESE BOATS

the least danger, it is probable that the new Shamrock will spread a trifle more of canvas in proportion to her length than did her elder and larger sister. Let's set it down at 10,400 square feet. That would be in proportion to 15,000 square feet for Shamrock III, half way between her actual area and that of Reliance. The square root would be 102.

Assuming that these dimensions are correct, the rating for time allowance is the next thing of interest. It would be 18 per cent of product of 75 multiplied by 102 divided by 15.5 and the problem works out at a rating of 88.84—all guesswork, of course, but with more or less of foundation for the guessing. The question that intrudes is: Will the designer of the new Shamrock take any liberties with quarter beam length and incur the penalty, in order to gain the extra speed to be expected from a longer heeled water line under way, and the extreme bow line?

Suppose he lengthens his quarter beam by a foot; his rating will increase to 89.43, involving a difference in time allowance on a thirty mile race of 23 seconds; nothing to speak of, perhaps, in a light wind, but oh my! a very long time in a close finish in a cracking breeze. During the past summer we have seen races of the Fifty-footers, of from twenty to twenty-five miles, won by only a fraction of 23 seconds. Therefore, we may guess that the new Shamrock will not incur much, if anything, in the way of penalties, and that her rating will not vary much in either direction from 89; in any event will not exceed 90. Make note of this in your vest pocket memorandum book, and ten months hence, look it up and see whether our guessing has been close, or "away off."

Mind you, this is the challenger upon which we have been figuring, and we have had this to begin with; that we have known the

load water line length. Now that we come to the defender, we have no such fixed dimension on which to start. There has been a good deal of comment over the apparent reservation on the part of the New York Yacht Club of the right to meet the challenger with a boat of any length within the limit named in the Deed of Gift—that is of any length from 65 to 90 feet. The fact is simply that the Club declines to surrender that right, on the ground that it might lead to additional complication in negotiations for races in the future. But no racing yachtsman will believe for a moment that the Club intends to meet the challenger with a boat materially larger, because such action would entail the concession of time allowance to an extent that would jeopardize the race at the outset. Consider for a moment; a yacht of 90 feet water line, built and rigged in the proportions of the 75-footer herein sketched, would rate 107.24 and would be compelled to allow the challenger 20½ seconds per mile, or 10 minutes and 17 seconds on a thirty-mile race. Such a condition is, of course, inconceivable. Moreover, it is the aim of all racing men, and of designers as well, on general principles, to eliminate time allowance whenever it is possible to do so. Therefore, we may look for a defender of practically the size of the challenger with this exception; that it will be equal rating, rather then literally equal size, or water line length, that will be sought; and that opens the way to possibly some difference in actual length of hull.

Look back to the measurement rule; never mind the 18 per cent for the moment. You multiply one factor by another, and divide the product by a third. In the abstract, you may increase either factor above the line and diminish the other to some extent, without changing the ultimate result, the rating. Or, you may retain the factors above the line and increase or diminish the one below, and thereby diminish or increase the rating. The thing is elastic in some degree, nothwithstanding the limits and penalties already mentioned, and Mr. Herreshoff or Mr. Gardner is able to take advantage of this elasticity in a way that is not open to the designer of the challenger, for the Englishman has one fixed factor, the water line length of 75 feet.

For the sake of a form a shade more slippery in the water, Herreshoff may make his quarter beam length something over the limit, counteract the penalty by shortening his water line, sacrifice an inch or two of draft and a few pounds of displacement, and thus without changing his rating, get a model a few seconds faster over thirty miles than he would have, if he conformed strictly to the rule and avoided all penalties. Herreshoff has built many boats under the present rule, and he is working on ground with which he is familiar, and he may take liberties with the rule which the Englishmen may not dare to take. And in view of the success of Josephine, during the past season, it is probable that we may look for a defender of something less than 75 feet water line, with something more than a hint at the full bow that is "tabooed," with a spread of approximately 10,000 square feet and a rating of from 88.5 to 89.5. Put these figures also in that pocket memorandum for future reference.

Just one more little matter to consider; and it is one that may make all this guesswork as foolish as Mother Goose rhymes. Half a dozen times nearly, in half a dozen times half a dozen years, the Herreshoff family has set all tradition and well fixed notions of ship building at naught, and has achieved something in the way of speed on the water that was previously considered impossible; and never has there been any warning of it. In 1876 the Herreshoffs built the original racing catamaran, that virtually went twice around the course of the Centennial races, while the real contestants—the catamaran having been barred—went around once. Four or five years later their steam yacht, provisionally called "No. 100"—I think it was the Polynia afterward, but am not sure—crossed the bow of the fastest steam vessel then afloat, over and over again in a run up the harbor. In 1885 Stiletto ran away from the Mary Powell as a Kentucky thoroughbred would run away from a truck horse, and made circles around the fastest yachts of the time, and in 1891 and 1892, Gloriana and Wasp pushed the best and fastest of the Burgess boats back among the Alsorans.

As you recall these achievements, the question arises: "What radical thing has Nat Herreshoff up his sleeve?"

True it is that these past achievements were of a time when naval architecture was very much less of an exact science, so to speak, than it is now, but the age of miracles never ends. Four years ago the motor-driven hydroplane was a thing not to be seriously considered in racing. To-day there are no racing motor boats that are not hydroplanes. And the underlying idea of the hydroplane is not new in sailing craft. Can it be possible that the "Wizard of Bristol" has been "wizarding" something out of the motor driven hydroplane for use in a cup defender? Turn back to the catamaran; is it possible that Captain Nat has evolved something out of catamaran and hydroplane that will shoot through the rules like a bullet through a sheet of paper, concede time allowance all out of reckoning and still win? It is a grotesque suggestion, of course; but don't forget that twenty-eight years ago last May, two catamarans, each forty feet long, modifications in only a small degree of Herreshoff's original, sailed a race from Bedloe's Island to Buoy No. 10 at the Hook and return, at a speed for short distances of 30 miles an hour. Sets you thinking, doesn't it?

But the "one best bet," after all, is that Captain Herreshoff will take little or no liberty with the rules; will incur nothing to speak of in the way of penalties, and will get the last fraction of speed by means of the very nicest refinement of form and the very closest adjustment, the one to the others, of the three factors of length, sail area and displacement. The accumulation of little niceties of detail counts for much in speed of a sailing vessel, and Captain "Nat" is a wizard on detail, as well as on the big things in naval architecture.

THE SAILING CATAMARAN WHICH FOLLOWED HERRESHOFF'S EXPERIMENT IN THIS DIRECTION

How to Build a 1 Foot Dory Skiff

By VICTOR SLOCUM

ONE of the most important parts of every boat's equipment, and at the same time one that usually gives the small boat owner a good deal of concern, is the proper tender or dinghy with which to get back and forth from shore. It must be large enough to have a fair carrying capacity, must be light so that it can be hauled on board if necessary, and must also be designed so that it will tow well even in a rough sea. One of the most satisfactory and useful dinghies for a small boat is the dory skiff which, if properly designed, combines all the necessary points of a good dinghy and at the same time is easy to build, or can be purchased for a small amount.

It should, however, be properly designed to be of real service, and should be at least 9½ feet long and not over 12 feet for use on a small boat. It is surprising what a lot of weight a 12-foot boat will carry if properly designed.

The dory skiff described in this article is well adapted to the requirements called for in a motor boat or small yacht tender, being of good carrying capacity, while it tows well, and is light enough for a husky chap to haul in over the rail by himself, if need be. Its dimensions are: Length overall, 10 feet 3 inches; length at bottom, 8 feet; extreme beam, 3 feet 10 inches; greatest width at bottom, 2 feet 2 inches. The layout of the bottom board and the general construction plan is shown in Fig. 1.

Anyone at all familiar with the principles of orthographic projection will find no trouble in enlarging the diagrams to full size. Project the construction plan, full size, on a sheet of building paper, stretched out on the floor, before doing anything else about the boat, so that you can get correct paper patterns from which to cut the various parts, molds, etc. Be accurate about the squares and parallels, as well as the figures shown in the diagrams, for they are taken from the molds of the best model of the kind I know. Don't get an idea in your head that there is a quicker way, and that there is no need to go to the trouble of drawing it first. This is the method of first-class workmen and must be closely followed in all cases, if the boat is to be like the design.

In the drawings and the description you will notice that feet are expressed with one dash, as: 5′, and inches by two dashes, as: 6″.

Use a chalk line for striking out the straight base line, and lay out the sweep of the bottom from this line with a long batten, so as to get the curve shown on plan. Draw in the stem, transom, and the cross section of the after cleat. By this means you will get all of the correct bevels, and while we are still at the drawing you had better lay down the sections shown in Figs. 2 and 3, for frames Nos. 1 and 2.

Fig. 4 shows a cross section of the boat and is self explanatory, both in regard to the construction and as to the use of technical terms, which will be used in this article, from now on, for the sake of brevity.

The materials that will be needed for the construction and equipment of the boat will be as follows:

Bottom boards—two pieces ⅞-inch pine, 8 feet by 13 inches.
Garboards—two pieces ⅝-inch pine, 11 feet by 16 inches.
Top strakes—two pieces pine, ⅝ inch by 11 feet by 9 inches.
Transom—one piece oak board, ⅞ inch by 17 inches by 3 feet.
Knees—four hackmatack knees, sided ¾ inch. Do not get the knees until paper patterns for them have been made, after which you can place them directly on the stock, so as to tell the shape needed.
Stem—spruce, 2 inches by 6 inches by 3 feet.
Rises (strips for the thwarts to rest on)—10 running feet of pine, ½ inch by 2 inches.
Cleats—16 running feet of oak, ⅞ inch by 1½ inches.
Thwart—one piece pine, ⅞ inches by 8 inches by 3 feet 6 inches.
Gunwales—two pieces oak, ⅞ inch by 1 inch by 11 feet.
Seat—6 feet, pine, ⅞ inch by 10 inches.
Nails—2 pounds 1½-inch chisel-pointed galvanized boat nails; 2 pounds blunt-pointed galvanized boat nails (get the boat nails at a store where they sell marine goods); 2 pounds 10d wire galvanized nails; 1 gross No. 10 1½-inch galvanized screws; 1 galvanized eye-bolt for the painter. (Have the bolt 4 inches long from the shoulder of the eye to the end, which should be threaded and provided with a nut and washer.)

One pair galvanized oarlocks (get the kind that slide inboard in a socket and which always remain with the boat when they are unshipped); 1 ball lampwicking for calking; 1 pound putty, and 2 quarts of paint.

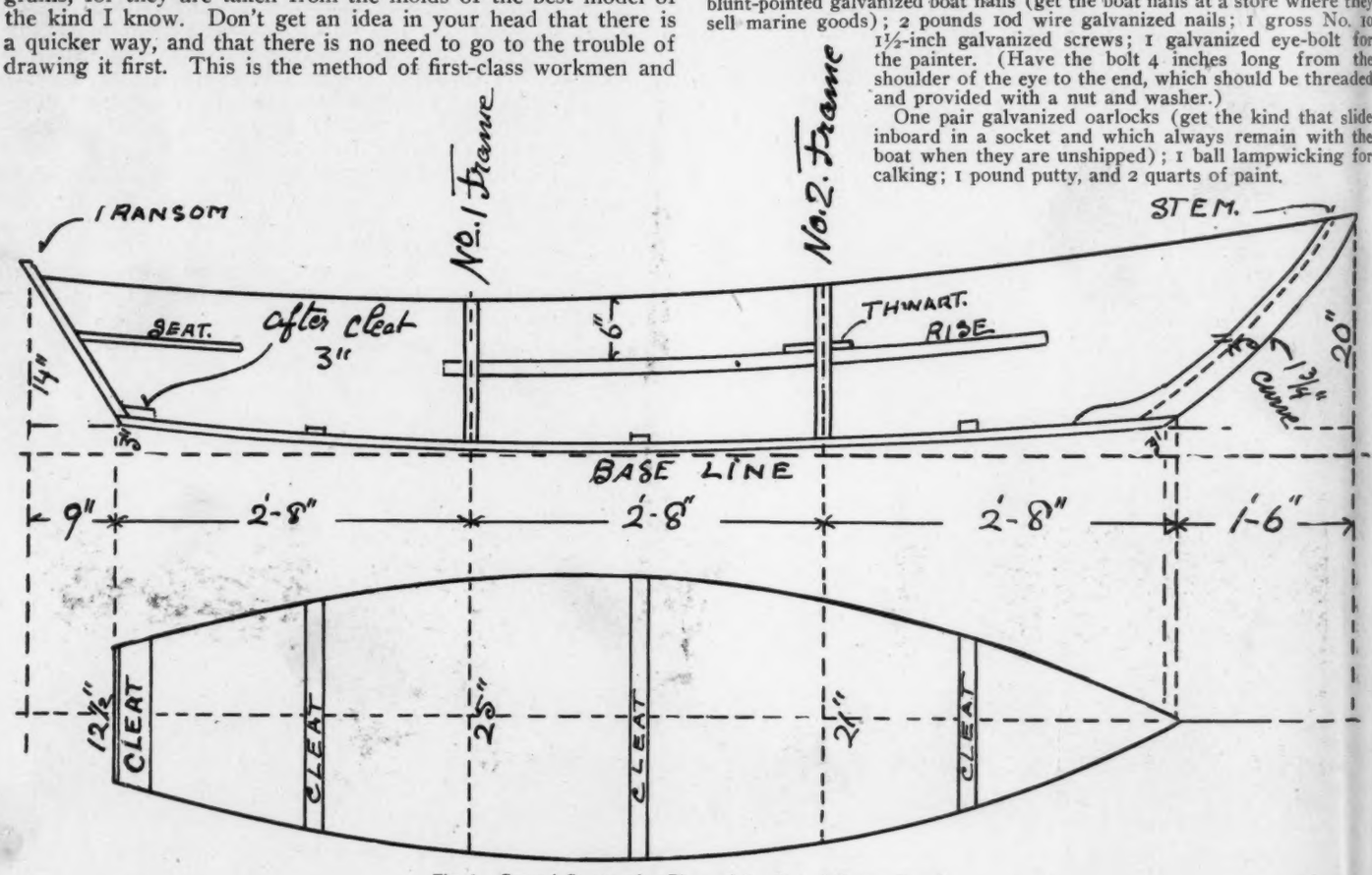


Fig. 1.—General Construction Plan and Lay-Out of Bottom Boards

In regard to a tool kit there is not much to say, as a who is not sufficiently accustomed to tools to know what he needs could hardly hope to make any kind of a job of this dory skiff, or of the Swampscott dory in the succeeding article. There is a great difference between men in their ideas about tools needed for certain work, all of which are founded upon personal experience. My own experience, however, is, that fine tools are labor savers, and the more complete the kit, and the more perfect the order in which it is kept, the more time will be saved. Before the introduction of modern tools among them, the Mukah Indians could, with a hatchet of stone and a mussel shell by way of a chisel, fashion a water-tight seam without calking! But how long did it take your savage? It would be interesting to get up against his condition to see if we could win out on equal terms, but I fear the hardware store is undermining our personal independence.

It may be well, though, to give a list of some essentials: Cross-cut saw of about 8 teeth to the inch; a jack plane; 2-inch chisel; steel square; claw hammer; bit brace; counter sink; No. 6 and No. 4 nail bit of the Syracuse pattern; a good-sized screw driver bit; a ¾ inch Jennings bit; a small calking iron; a draw knife; a bevel; a spoke shave; a vise, and a large hammer and a flat piece of iron for a "hold on" in clenching nails. Saw horses come properly under the head of tools and it will be well to make a couple. You will also need a small spirit level, and some sort of a work bench. If you can't do any better, rig up a temporary bench by cleating a plank to the wall.

For a foundation horse you will need a 6-foot piece of 2-inch plank, at least 6 inches wide, as well as 10 or 12 feet of 2-inch by 3-inch spruce. This foundation horse is to build the boat upon, as it is built upside down, and must have a firm foundation to rest on.

We are now ready to make the bottom piece of the boat. Plane up an edge on each of the 13-inch boards so that they will fit neatly together, and mark "outside" on the best side of each board to denote the bottom face. Now, on the planed edge, on the "out" corner, take off a coarse shaving with your jack plane, just enough so that when the inside edges of the boards are tightly clamped together the outside edges will be about

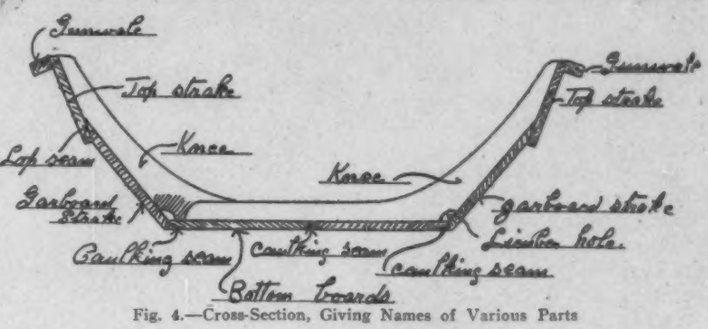


Fig. 4.—Cross-Section, Giving Names of Various Parts

1/16 inch apart. That will be the calking seam, shown in Fig. 4.

Put the boards "outside" down on the horses and tack them close together. With the seam for a center line, and with Fig. 1 for a guide, square off the frame sections, and observe that the bottom is 12½ inches wide at the transom, 25 inches wide at No. 1 frame, and 21 inches at No. 2 frame. Fig. 5 will show what I mean a little more plainly. Drive a brad at each point marked off. Secure battens (long, thin strips of wood, easily bent) with brads to stations, and mark to get the shape of curved edges of bottom. The best way to brad a batten, is to drive the brads opposite each other, so as to allow the batten to "flow" naturally between them. Before finally marking cast your eye over the curve to see if it is true. It is not a good plan to drive the brads directly through the batten into the stock, as the resulting line is apt to be unfair. And it is generally best to draw the batten around the outside of the curve instead of around the inside. (Fig. 6.)

Having lined off the sides and drawn as fair a curve as you can get, cut out and fasten on the cleats (⅞ inch x 1½ inch oak) in between the frame sections, keeping the ends to the line. Use some small nails for this, about 1½ inches (they must not go through) and drive two or three in each board. In making the after cleat, take the bevel of the transom right off the construction plan which you have made on the floor, and fasten it an

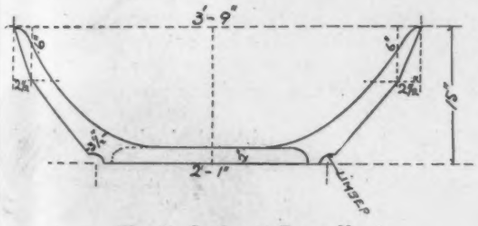


Fig. 2.—Section at Frame No. 1

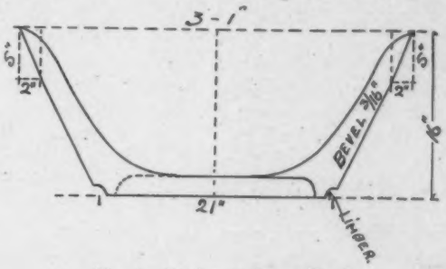


Fig. 3.—Section at frame No. 2

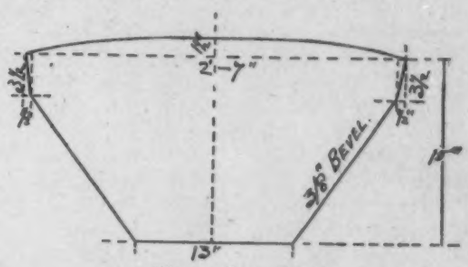


Fig. 8.—Stern Transom

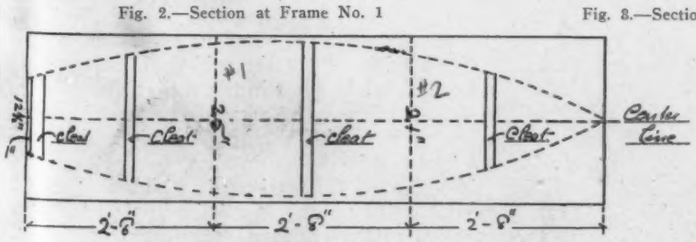


Fig. 5.—Pattern of Bottom Boards

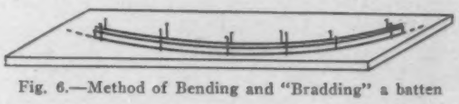


Fig. 6.—Method of Bending and "Bradding" a batten

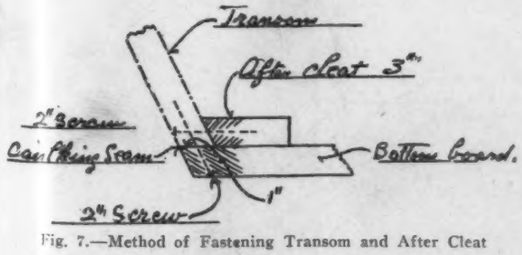


Fig. 7.—Method of Fastening Transom and After Cleat

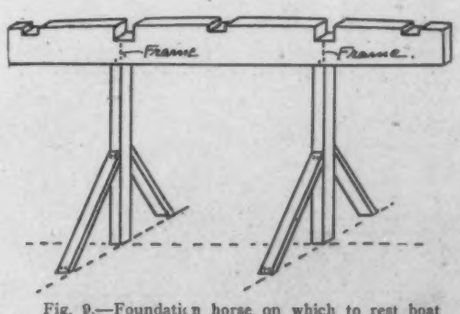


Fig. 9.—Foundation horse on which to rest boat (upside down) when building

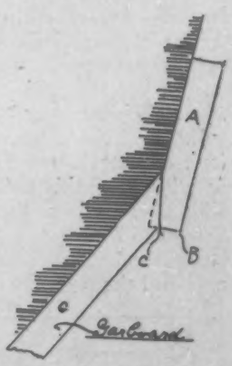


Fig. 13.—Method of Getting Top Strake Bevel with a Gauge Block

inch from the end of the bottom piece, as shown in Fig. 7.

Now, turn the whole thing over and drive 1½-inch screws in the cleats about 4 inches apart. A word about driving screws: For the No. 10 screw, bore with a No. 6 bit through the bottom board, but not into the cleat. Bore with the No. 4 bit into the cleat and drive the screws with a brace and screw driver bit, so that the heads of the screws sink just below the surface of the wood and can be puttied. Never, while building a boat, use a hammer on a screw, no matter who may say so.

We are now ready for the transom, as the board that forms the back end of the boat is called. (Fig. 8.) The transom can be lined out directly on the stock itself. Fasten with 2-inch No. 10 screws as shown in Fig. 7. Make the stem off from construction plan and fasten to bottom board by 2-inch No. 10 screws, driven from the bottom into the stem, having a care that the foot of the stem is directly in line with center of the boat. The bevel line of the stem is 1¾ inches from the face.

When you mark off the knees have the foot of each knee long enough to reach nearly across the bottom of the boat, so that when they are fastened together they will look something like that shown in Fig. 3.

As I have already said in the paragraph on materials, take the pattern to a lumber yard where they sell boat stock and select a crook the shape you require. Hackmatack is the lightest wood and has the most spring, and is therefore the most expensive. If you are in a place where you can't get the hackmatack, an oak knee will answer the purpose very well, but will be much heavier. Well seasoned apple wood makes excellent knees, which are much used by Cape Cod boat builders, but the wood should be cut at least a year before using.

A good way to work out the frames is to have the "mill man" plane them to dimension (¾ inch thick) and cut them to shape on his band saw. It will be much more fun to toss up half a dollar and watch him do it in a jiffy than to tug at them by hand in the vice for half a day. But, of course, you can smooth them up yourself in the vice with the spoke shave.

Fasten the frames together right on the pattern drawing with 1½ inch blunt point nails, boring for them first. Before taking a frame up from the floor fasten a brace across the top to hold it in shape, using a screw at each end. Be sure to mark the center while it is yet on the drawing, for future use.

Fasten the frames in place on the bottom boards with blunt pointed nails, driven through from the bottom, but before doing so cut out a notch in the heel of each knee for a limber hole to allow water to run along the chines; they will be seen in Figs.

A convenient way to fasten the frames down to the foundation is to first drive a couple of screws into them from the bottom, making sure that the lap of the frames comes exactly on its proper section line. When it is secure, turn the thing over, rest the lap of the frame on something solid, such as a horse, and drive in your nails, without a boring, about 3 inches apart in each frame, setting them well into the wood with the nail set. In this way everything will be "wood and wood," and solid.

The stem and the transom are fastened in place in the same manner, the point being to have it feel solid when you "soak in" any of your fastenings. If you ever feel a spring where you are driving either a nail or a bolt, put the work against something solid, or hold a heavy hammer over the place, if the fastening isn't coming through, and near the hole if it is coming through. Mind you, I said "hole," for it is against the decalogue of the boat shop ever to drive through a fastening without boring for it; and a man violating this law is no boat builder—or at least he may be said to have a plentiful lack of appreciation of the boatbuilder's art; and the novice of keen sensibility will see this as he proceeds.

We are now ready to make the foundation horse (Fig. 9) and set up the boat, which we had better build upside down for the sake of ease and speed in doing the rest of the work.

Lay the 6-foot plank, bought for this purpose, down on the construction drawing, about midway between the ends and flush with the base line. Mark on it the 3-inch sweep of the bottom, the location of the No. 1 and No. 2 frames, and also the location of the cleats. Take it up from the floor and trim to the sweep line with your draw knife, remembering that the boat is to be laid on it upside down. Now set it up plumb and level on the floor as shown in Fig. 9, having a care that the uprights are in line with the frame locations, and brace well to the floor. Cut in some notches large enough to let in the frames and cleats, and with room to spare.

Remove the braces from the frames, turn boat over, set the bottom on the foundation horse, center to center. Tack a nail or so in the middle where it touches the horse, to keep it steady, put the braces back across the top of the frames just as you took them off, seeing that the screws go back into the very same holes they came out of. Spring the bottom down to the sweep of the horse by putting a shore at each end to the ceiling, and tack in place. Level the braces of the frames and fasten each one with a screw to the upright you will find next to it; the center mark on the spall ought to coincide with the center of the upright after they are leveled. But if they do not, you had better depend on what the spirit level tells you. Plumb the stem and brace well to the floor; level the transom and brace well to the floor also.

After seeing that all is secure you may go ahead and bevel the outside edges of bottom boards in line with the angles of the stem bevel, the frames and the transom. The ordinary way to do that is to spot each of the points, and then counterline with the batten, which will give two lines to work to, as shown in Fig. 10, which shows a "spot." This is the general way in which all boat builders line out a bevel that has a changing angle. Plane it as fair as you can after working it down with the drawknife, and see that it has no lumps, otherwise you will have a poor seam to work the garboard strake to.

Joint the upper edges of the garboard plank and bevel each edge ¾ inch to form the lap of the next plank. When boatbuilders are working a lapstrake bevel they have a small plane that is ground rounding, so that the resulting bevel is slightly hollow; and the lap made by the meeting of these two concave sections becomes water tight when drawn together by the rivet. The beginner may as well learn to do it this way first as last. Fig. 11 shows what I mean. Leave the sharp point at A about 1/16 inch thick.

Having worked the bevel, wrap a garboard plank around in its place, and the bevel edge will come to the angles in the frames and transom. Use the 1½ blunt point nails for the stem, frame, and stern fastenings, and the long wire nails for the bottom.

Dory builders have a trick of their own in driving the bottom nails, and that is to bore first with the small nail bit, then start the nail in gently until the head is within about half an inch from the wood, and then (mark this well) set it in the rest of the way with the punch, keeping the punch pointed away from the edge of the garboard. In Fig. 12 I have tried to show how it is done. By this means the fastenings can be driven in about every four inches without splitting the edge of the garboard, which is the chief thing to guard against at this point. If all the angles do not coincide with the lap edge of the garboard, fair them up with the

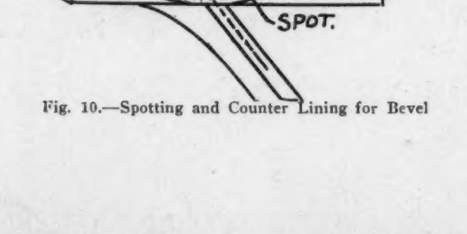


Fig. 10.—Spotting and Counter Lining for Bevel

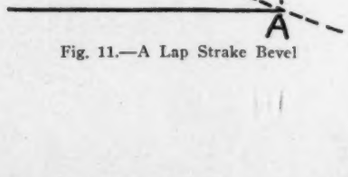


Fig. 11.—A Lap Strake Bevel

Fig. 12.—Proper Way to Drive Nail Through Garboard Without Splitting Plank

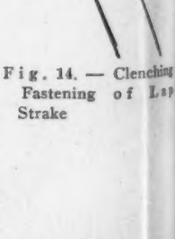


Fig. 14. — Clenching Fastening of Lap Strake

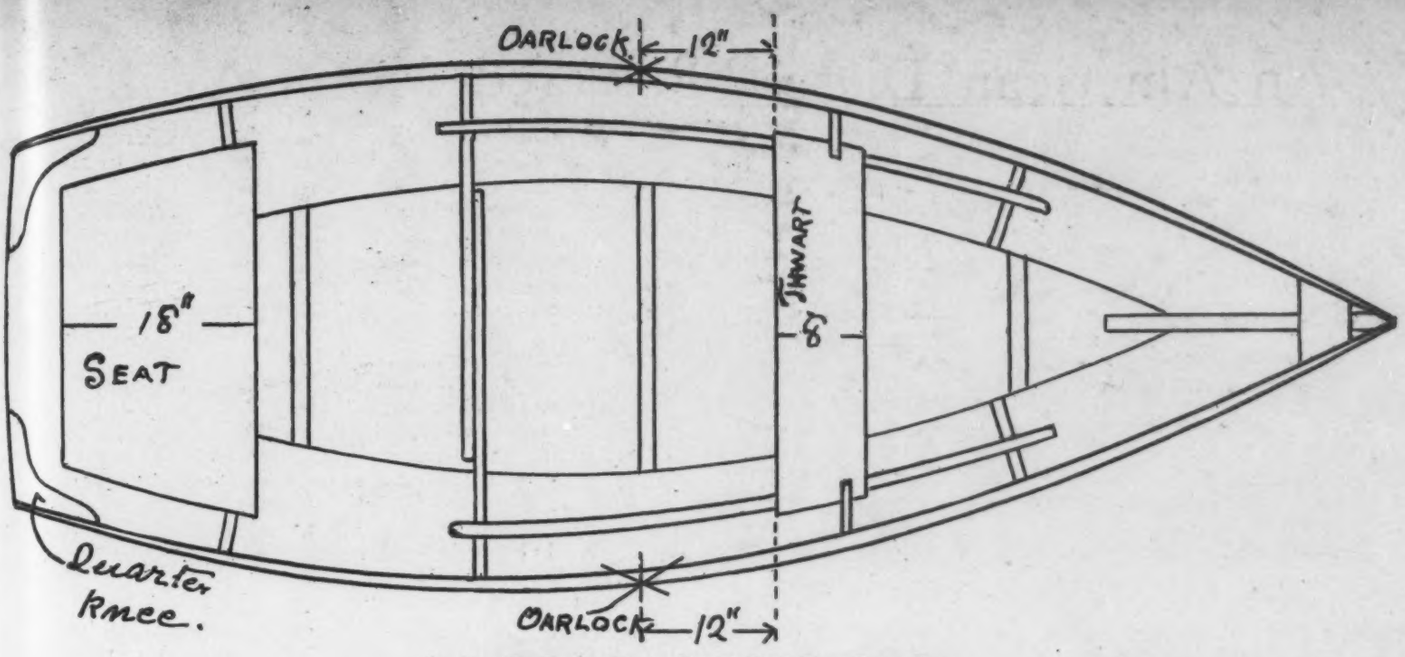


Fig. 15.—The Completed Boat, Showing Rises, Seats, Knees, Etc.

chisel and then get ready to put on the top strake.

You are now up against a thing called by shipwrights the *spiling*. No one seems to know how the word came to be invented, but in the simplest terms it means the shape of a plank that will enable it to fit the last plank that has been fastened in place, as they say. There are many intricate methods for getting the spiling to a surprising degree of accuracy, but we have a simple case before us and do not need them.

Wrap a top strake plank around at its different angle, and you will see where the edge differs in shape from the edge of the garboard. Now come up with the top strake and wrap it around in its place again, but with the least point of difference overlapping the garboard about an inch; then crawl in under your boat with a pencil, and mark the new plank just under the edge of the garboard. On taking off the top strake again you will find a sweeped line marked in that will be the spiling.

Lay your plank with this line side up, on the bench, and batten the line to fair it up. Then batten off another line ¾ inch nearer the edge of the plank than the first line, which will become the counter line of the lap bevel you are about to make. After clamping it in the vise and working it down with a draw knife to the second line you have drawn, which is nearest to the edge, plane out lumps and hollows and the plank is ready as far as the shape is concerned. There is still another thing to do with it, and that is to work the lap, but before we are ready to do that we will have to wrap the top plank around the boat again, and mark the location of the frames and transom for spotting.

Take a small piece of the ½-inch planking for a gauge block and at frame No. 1, find out how much you will have to bevel the end to have it fit into the garboard bevel, and at the same rest on the frame. In Fig. 13 I will try to show this a little plainer. G is the garboard (boat right side up) and A is the gauge block. By sliding the block A down on the garboard bevel you will find that the section inside of the dotted line will have to be cut out, leaving the edge C B, which are the two points we are after.

Get the points C B at frame No. 2, and also at the transom. At the stem the two bevels are equal, because there is no knuckle to make a difference. Prick off the thickness found at C B at its proper points on the edge of the plank, spot, batten for the counter line and proceed to bevel. This process may seem tedious, but it is the only way it can be done well; and after a few dozen boats you will work with surprising dexterity, for it takes many mistakes and much practice to make a really good lapstraker.

When the top strake is fitted to your satisfaction, fasten to ends and frames, and clench the lap together with the 1½-inch chisel pointed nails, which should go in about 3 inches apart. And now a pointer about clenching. Bore off the strake first with the No. 4 bit, and incline the holes to a right angle with the lap as shown in Fig. 14, and ½ inch from the edge. Hold a big hammer on the inside while driving the nails, as I have directed in a former paragraph, and see that the chisel points are at an angle of about 45 degrees with the grain of the wood.

Then have an assistant hold the big hammer on the head of each nail while you go in underneath and clench it, being careful to turn the chisel point away from the feather edge of the inside plank, allowing each clench to be buried in good solid wood. If the outside hammer has a convex face, or, what is much better for the purpose, a round peen, you can draw the nail head in enough to putty by having it held hard while you strike smartly on the clench; and this will make sure that you draw the wood well together.

While the boat is still on the horse and well stayed, trim the plank ends with the plane and calk the seams, after which you can fasten on the outboard stem strip. Then you may take up all of your stays and braces; turn your boat right side up to trim the top sheer, fasten on the gunwales, and put on the inboard fittings. Taper the gunwale strips from 1 inch to ½ inch at the ends, and fasten them on the outside of the boat, edgewise, by means of screws from the inside, about every 8 inches.

Fig. 15 shows the inboard lay-out of rises, thwart seat, position of oar-locks, and quarter knees.

The forward ends of the rises (strips for thwarts to rest on) are fastened to some extra cleats that are run up on the inside for the purpose of holding them. It will be well to fasten the thwart, which is notched around the frames, to the rises, if you are going to use the boat in a locality where such things are apt to be "borrowed," and it will also serve the purpose of something to padlock the oar to; otherwise the thwart is put in loose, so as to come out easily.

The seat is put in fore-and-aft on a couple of ledgers that run thwart-ships, one ledger being fastened to the transom, and the forward one to some extra cleats, as at the forward ends of the rises.

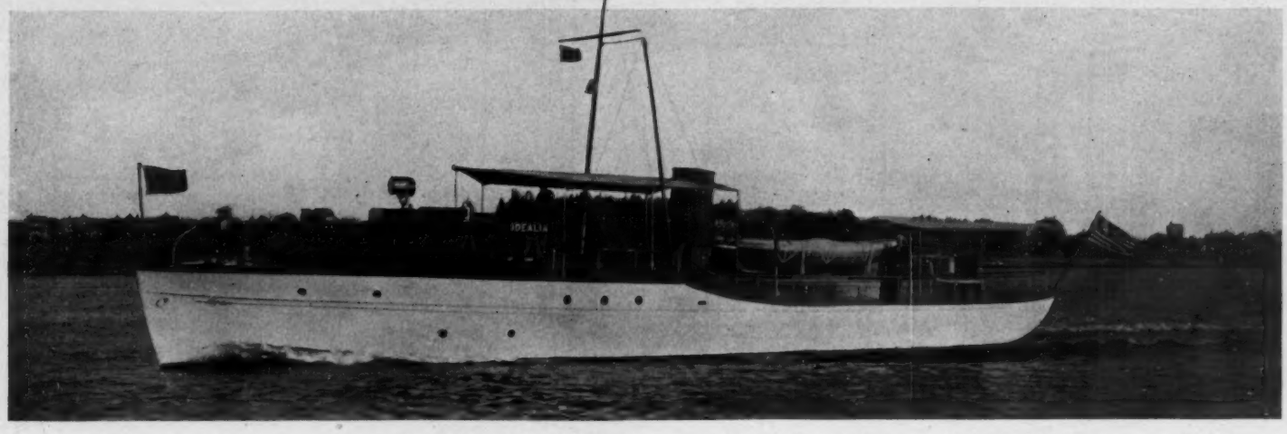
Work the two quarter knees out of a natural crook, ⅞ inch thick, and fasten with screws from the outside.

Have the eye of the painter bolt outboard about half way down the stem, to make her tow the best.

Then with a priming coat and two good coats of white lead you will have a first-class little "dink" that you will never be ashamed of and that will serve you to good purpose even under hard conditions.

In the January number will be the second article of this series, by Victor Slocum, on How to Build the Swampscott Dory

An American Diesel Powered Motor Yacht



THE FIRST FULL POWERED DIESEL-ENGINED YACHT TO BE SUCCESSFULLY TRIED IN THIS COUNTRY

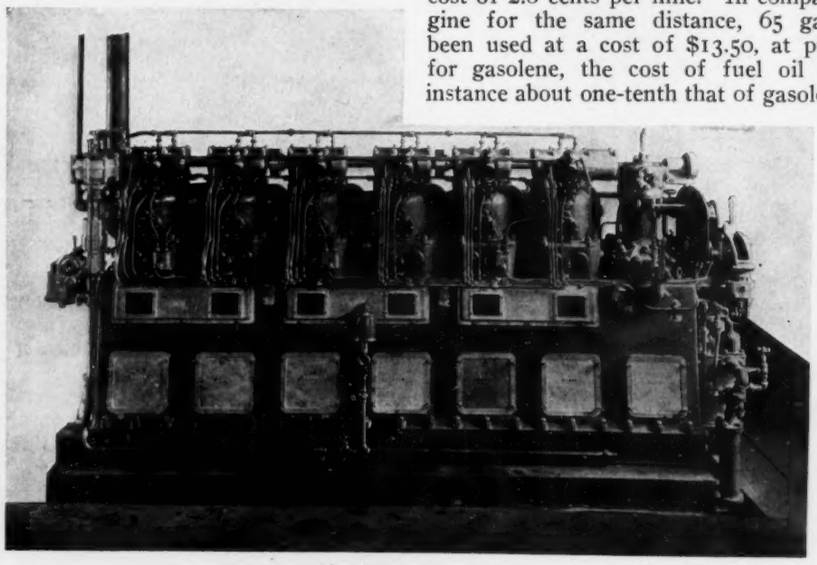
THOUGH the Diesel engine for commercial use may be considered past the experimental stage, having become a very recognized feature in marine propulsion abroad, no great amount of attention has been devoted to adapting this kind of power for yacht use until recently, largely owing to the fact that the commercial field was absorbing most of the efforts of builders of engines run on the Diesel principle. This type of power, however, undoubtedly promises much for yacht use in boats of fairly large size, and in England and this country two motor boats of about the same size have recently been completed and have been given very satisfactory tryouts. The English boat is a 95-footer and the American an 84-footer, and we naturally are much more concerned with the latter craft.

This yacht, the Idealia, is a wooden vessel and was not designed primarily for this type of engine. The boat itself is of the conventional type of American power yacht, 84 feet long with a beam of 14 feet and a draft of 4 feet, with a raised deck forward, on top of which is a deck house over a large forward saloon. Aft there is another saloon and staterooms. She is powered with a 150-horsepower American built Diesel engine of the Nurnberg type.

This engine operates on the two-cycle principle, has six cylinders and one two-stage air compressor cylinder, and develops its rated power at about 550 revolutions per minute. The engine is located amidships between two water-tight bulkheads, and does not occupy much, if any, more space than the average gasolene outfit for a boat of this type. The fuel tanks for the crude oil which is used are in the engine compartment, one on either side, and have a capacity of 800 gallons, which gives the boat a wide cruising radius.

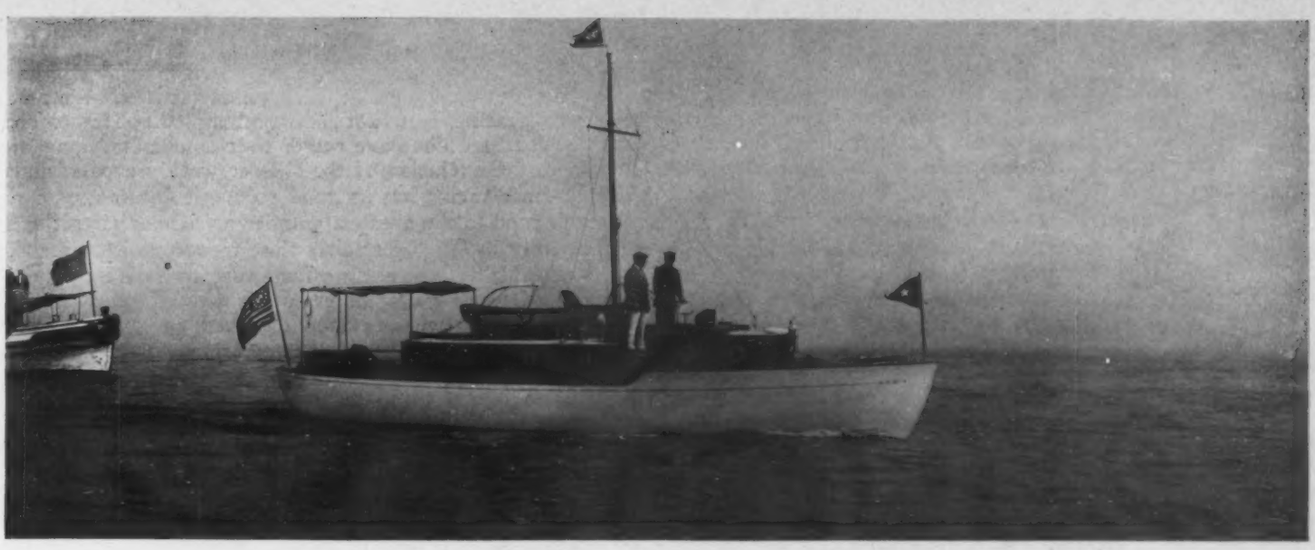
The engine itself looks from the outside very much like a large six-cylinder gasolene engine, with an additional air compressor cylinder added at the forward end. There is no fly wheel, the six cylinders working on the two-cycle principle furnishing an even turning movement. On the top of each cylinder are the valves and fuel injectors. The total weight of the engine is about 9,000 pounds, and the length of the engine proper is about 9 feet, its extreme width being 24½ inches. It is directly connected to the shaft, the engine itself being reversible, a very efficient patented reversing system being provided, a single lever being used to start, stop and reverse. The working cylinders are 7 inches by 8 inches, and the fuel consumption is about a half pound per horsepower per hour at full revolutions, and two-thirds of that at a normal cruising speed of 400 revolutions. As the oil weighs 8 pounds per gallon, this means about ½ pint per horsepower per hour, or approximately half of the normal gasolene consumption.

The highest speed obtained in Idealia is 14.6 miles per hour. On a recent run made on Oct. 22, from the Columbia Yacht Club up to Croton Point on the Hudson and back again, a distance of slightly over 60 miles, the very best opportunity was had for observing the working of the engine. On this run a speed of 12 miles an hour for 5 consecutive hours was maintained on a normal engine speed of about 425 revolutions. The boat moved along very smoothly with little vibration and with an entire absence of smell or any unpleasant odor from the engine or exhaust. The fuel used was crude oil, and during the test the consumption was 35 gallons, at a cost of 3¼ cents per gallon in barrel lots, or a total of $1.14 or 1.9 cents per mile. The lubricating oil amounted to .7 cent per mile, making a total cost of 2.6 cents per mile. In comparison with the gasolene engine for the same distance, 65 gallons of fuel would have been used at a cost of $13.50, at prevailing New York prices for gasolene, the cost of fuel oil consumption being in this instance about one-tenth that of gasolene. The engines of Idealia were built in this country under American license of the Nuremburg, Ger., makers. At the present stage in the development of the Diesel engine the cost is possibly 25 per cent or 30 per cent higher than the gasolene motors of the same power. The saving in operating expenses will make up for this difference in price in a very short time. In operation the engine was handled with the greatest ease. It required but 30 seconds to start her on compressed air, and she



THE EFFICIENT SIX-CYLINDER DIESEL ENGINE OF IDEALIA

(*Continued on page* 321)



SHAWNA, ONE OF THE POWER BOATS OF THE BOSTON YACHT CLUB FLEET

The Month in Yachting

Organizing a National Power Boat Squadron

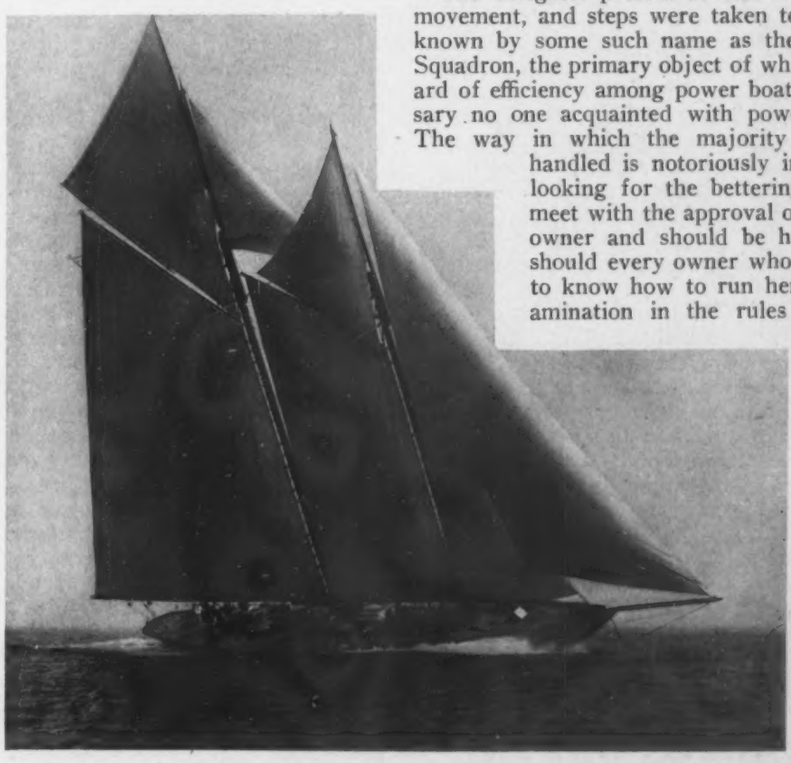
SOME two years ago the power boat members of the Boston Yacht Club, feeling that the club, which was primarily a sailing organization, was not paying enough attention to the needs of the power boat owners, organized a power boat squadron, a sort of sub-organization inside of the larger club. The object of this organization was to bring together the power boat men for their mutual benefit, and from the start the organization strove to bring about a higher standard of efficiency among power boat owners. So successful was the organization and so popular did the squadron become that it was a very distinct factor on the New England coast, and the Portland Yacht Club soon followed its example.

The squadron was organized on more or less naval lines, and the skippers were drilled in signaling by the international code and in squadron evolutions, cruising in squadron being one of the things instituted by the members. Later, all the owners were required to qualify as pilots, and when they had done so a certificate was issued to them, so that membership in the squadron and the right to fly the squadron flag or pennant indicated that the owner was capable of navigating his boat anywhere along the coast. This latter feature was heartily commended by the merchant marine and the Navy Department of the United States.

Outside interest in the organization spread, and on Nov. 12, at the instigation of the Boston Yacht Club, a meeting was held at the New York Yacht Club in New York at which delegates from 36 clubs met, with the object of promoting other like organizations among the yacht and motor boat clubs of the United States, embodying the general principles just mentioned. The Assistant Secretary of the Navy, Mr. Roosevelt, was represented at the meeting by Captain Fullem, who stated that the Navy Department was heartily in sympathy with the movement, seeing in it an organization that might be of great value to the government in time of need, in furnishing an auxiliary power boat fleet for coast patrol, despatch service, etc. Through such an organization of boat owners, qualified to command their own yachts and used to discipline and navy practice, a very useful fleet could be easily gathered.

The delegates present seemed heartily in sympathy with the movement, and steps were taken to form an organization to be known by some such name as the United States Power Boat Squadron, the primary object of which is to attain a higher standard of efficiency among power boat owners. That this is necessary no one acquainted with power boating affairs will deny. The way in which the majority of motor boats have been handled is notoriously inefficient, and any movement looking for the bettering of these conditions should meet with the approval of every intelligent motor boat owner and should be heartily supported. Not only should every owner who navigates his own boat want to know how to run her and be able to pass an examination in the rules of the road, the compass, pilot water navigation, etc., but the pleasure to be derived from sailing his own boat would be greatly increased by navigating her in an exact and scientific manner.

The yacht and motor boat clubs from the Atlantic to the Pacific should support such a movement and should make the distinguishing emblem of the organization one that is respected everywhere as a mark of efficiency, as it is now respected on Massachusetts Bay. It might perhaps be better, especially in large communities,



HAROLD VANDERBILT'S NEW SCHOONER VAGRANT, WHICH CROSSED THE ATLANTIC THIS SUMMER

such as New York and Chicago, to have membership not entirely intensive, that is, within the existing clubs, but have it open to members of any recognized yacht club that can qualify, whether or not his particular club happens to have an organized power boat squadron. This, however, is a matter of detail, to be taken up later.

The Lake Michigan Situation

Yachting on Lake Michigan is coming along by leaps and bounds, if one can judge from conditions at Chicago during the recent Manhasset Bay Cup Series. Not only is every yachtsman enthusiastic and showing the keenest interest in the sport, but they are getting a fine fleet of boats behind the breakwater at Grant Park, and before next year they will probably have the finest fleet of Class P boats in the country, rumors being that there will be at least one and possibly more boats added to the class this winter, in view of the fact that the Chicago Yacht Club will go to Toronto to sail a series of races with the Royal Canadian Yacht Club for the Yacht Racing Union Cup, won by Patricia in 1912. There is even talk of their obtaining Josephine, the fastest boat in the class on the Atlantic coast this last season.

Outside of the P Class, which they are developing rapidly, there is a good-sized fleet at Chicago, and it is strange that more consistent racing has not been attempted. Heretofore, the Chicago Yacht Clubs have rather over-emphasized long distance racing, to the exclusion of the shorter weekly events; and while long distance racing has its good points, it does not as a rule do as much good to the greatest number as regular circuit racing.

With four or five clubs fairly close together within the Chicago limits, and Milwaukee not too far away, it would be easy to have a series of week-end open races divided between the different clubs, extending over a period of seven or eight weeks, for a series championship such as on Long Island Sound or Massachusetts Bay. While at present they have only one good Universal Rule class, others could be easily formed, and the older boats and those that did not fit any special class could be raced on a handicap basis, such as in the Handicap Class of Long Island Sound, a complete description of which was contained in the last issue of YACHTING, or on some such rule as that used by the Interclub Class of Massachusetts Bay, a class founded to take care of the boats that were out-built in the regular classes or that did not fit any particular rating.

Taking Care of Your Engine for the Winter

How to Give the Necessary Attention to Your Power Plant to Prevent Deterioration

NOW that winter is here in earnest, and the snow has begun to fly, the last of the motor boats are being laid up, and it is time to think seriously of preparing your motive power for the long period of cold weather during which it is to lie idle. Many of those who hauled out early have already seen to this, but it is all too common to have the boat hauled out and covered up without giving the engine the proper attention necessary to keep it from deteriorating during the winter. It must always be borne in mind that four or five months of neglect while an engine is not in use is harder on it than an equal period of time when the engine is in use, yet has daily or at least periodical care.

Don't be content with merely draining off your water jackets, slapping on a dab of grease here and there, and letting the engine go; but give it the same care and attention that you would any other valuable piece of machinery. It is not necessary to take an engine all apart when laying it up, though if you intend to take it down in the spring when overhauling it, the work might be done just as well in the fall, and thus insure its being put away in the best possible condition. In this way you can find out if any parts are worn enough to need replacing the following year, and if so you will have ample time to get the parts and get the engine assembled early.

DRAINING JACKETS

The first thing to do when preparing the engine for the winter is to drain the water jackets and piping. Be sure that all the water is out so that nothing is left in the jackets or pipes to freeze. To do this it is often necessary to supply an air vent at the highest part by opening a petcock, if there is one, or breaking a joint in the pipe, as it sometimes happens that the jacket appears empty when it is really half full of water owing to its not draining for lack of an air vent. It is also possible that the cock of the water jacket may not be at the lowest point, and that some water will stand in the bottom of the jacket below the cock. In this case run your engine a few minutes after you have drained the jackets, first having shut off the sea cocks so that the heat of the engine will evaporate this water. Don't forget to drain the muffler and the exhaust line at the same time, as most exhaust lines are now water cooled and carry considerable water.

CLEANING CYLINDERS

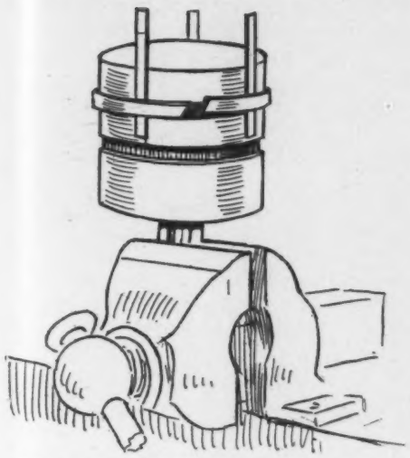
The next thing to do is to see that your cylinders are clean and free from any carbon deposit, which might cause the piston to freeze by the following spring. If you have had good compression and it is not necessary to renew piston rings, you do not have to remove the cylinder or cylinder head to do this, as there are a number of good carbon removers on the market which will answer the purpose. Squirt a generous dose of the carbon remover in through petcocks or spark plug openings, turning the engine over a number of times. If the engine is a multi-cylinder one, this can be done to one cylinder at a time, running the engine on the other cylinders to work the remover in thoroughly. If the engine is a single-cylinder one, use a squirt gun through the spark plug opening and squirt the remover on cylinder walls and top of piston. Let it remain a short time, cranking the engine; then apply another dose and repeat the operation. In either case, drain all the remover from the base of the engine when through, and then give cylinders a dose of gasolene to clean thoroughly. If carbon remover cannot be had easily, kerosene will answer the purpose. Finally, give all cylinders a good dose of oil, turning them over a few times to work it in.

If you have had loss of compression and you think that your piston rings are stuck, remove the piston by either taking off the cylinder head and disconnecting the piston rod, or take off the entire cylinder if it has not a removable head. In removing the rings from the grooves great care must be taken not to break them or mar the edges. A good method is to use two or three narrow strips of thin metal, slipping these in on one side of the ring where it is broken, and working them around the outside of piston, spreading the ring so that it can be slipped off of the piston, as shown in the accompanying drawing.

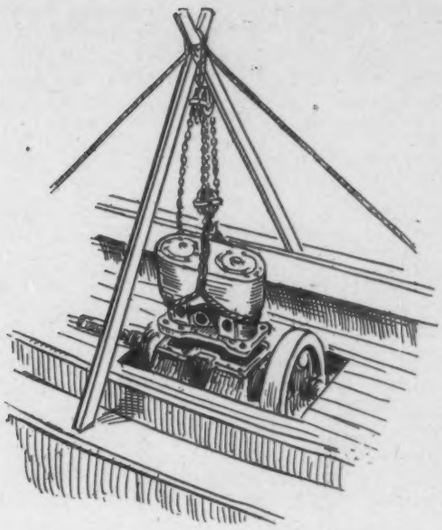
If the piston is anyways large and the rings stiff, it can be held in a vice, clamping the latter over the connecting rod close up to the bottom of the piston. In this way it is easily held. When the engine is put together again and left, see that all petcocks and openings are closed so as to prevent dampness or possible dirt from getting into the cylinders. If this is done and the cylinders are well oiled, they will be found in good shape the following spring.

CLEANING JACKETS

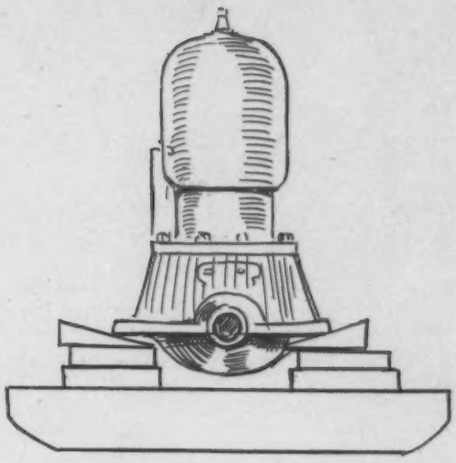
Next, look the pump over, seeing that all the working parts are in good shape and not worn. If you have had any trouble with your water circulation and over-heating of the engine, it would be well to clean out the water jackets. These ought to be cleaned every year, as a certain amount of sediment and scale is apt to collect in them and clog the free circulation of water. This can be done by dissolving a pound of concentrated lye in ten gallons



REMOVING RINGS FROM A PISTON HELD IN A VISE



LIFTING TWO-CYLINDER ENGINE WITH SOLID HEADS



THE ENGINE CAN BE RAISED OFF OF ITS BED WITH BLOCKS AND WEDGES IN THIS MANNER

of fresh water. After the boat has been hauled out, place this in a pail under the water intake pipe, running a small length of hose from the pipe to the pail, and returning the water outlet back to the pail. Then run the engine for a few moments, pumping the lye water through the jacket. When thoroughly clean, substitute fresh water for the lye and repeat the operation to clean the jackets. Also see if all gaskets are in good shape and have enough "life" left in them. It is also well to look over all your bearings to see if any are worn and need replacing. If they are slightly loose and only need tightening, take out a shim and set up on the bolts. If they need replacing, have it done before spring. You can get the work done very much quicker and more cheaply in the fall.

CARE OF BATTERIES

Remove all batteries. If dry ones are used, throw them away, as they will be no good the following spring. Disconnect all wiring and cover the terminal threads with vasolene to prevent rusting. If you use storage batteries take them out and store them in a place where the temperature is sure to be always above freezing, as it will ruin a storage battery if it is ever frozen. To keep such a battery in good condition the accumulator cell should be fully "discharged," and then recharged at a slow rate so that all the free sulphate may be reclaimed by the plates.

There is always a certain amount of moisture in a boat laid up for the winter, and for this reason it is wise to remove the coils, especially if they are high-tension ones. For the same reason it will pay to remove the magneto. If this is not done, the latter should be well cleaned and oiled to prevent rust. Finally, give all working and bright parts a liberal coat of tallow or heavy grease.

The Log of Windward

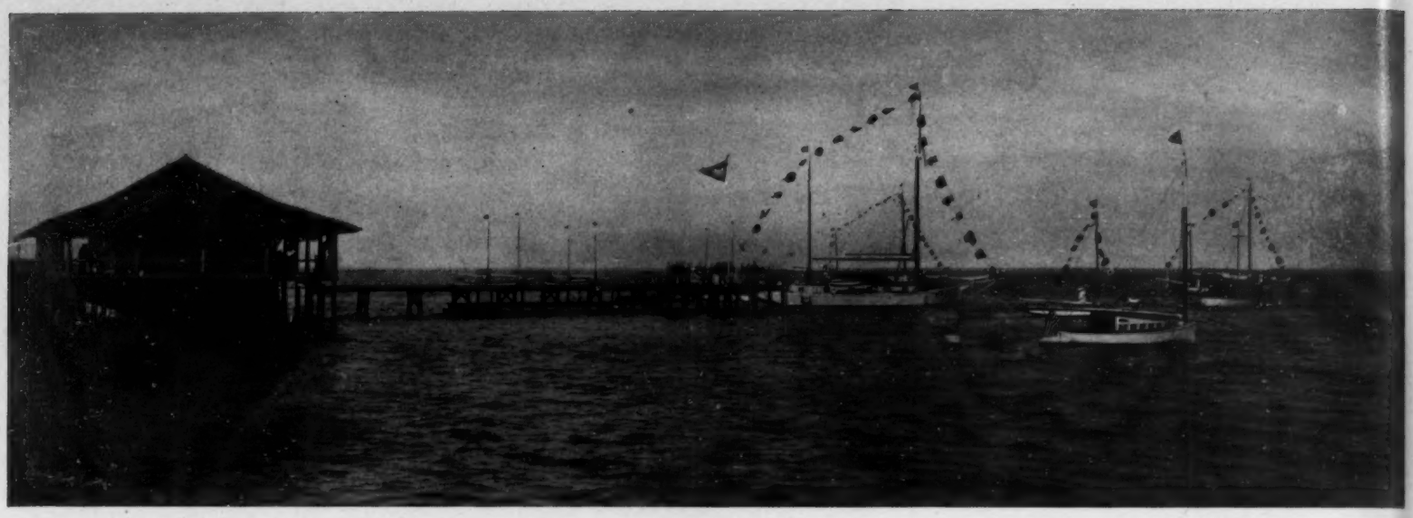
THE following is the log of the sloop Windward on a voyage from New York to Halifax, N. S., in September of this year. Mention was made of this trip in the last issue of YACHTING, and as the passage was a particularly creditable one for a small boat, the full log is published here. Windward is a P class sloop, or 31-rater, 50 feet 8 inches long over all, 33 feet 2 inches water line, 9 feet 4 inches beam, 7 feet draft, and carries 1,230 square feet of sail.

The ship's company consisted of R. A. Corbett (owner), V. C. Johnson (skipper), Howard Lawrence, H. G. DeWolf, William Roue, E. M. McLeod, all amateurs. The boat was purchased on Thursday, provisioned and outfitted on Friday, the crew going on board for good on Friday night.

During the evening one of the crew was taken ill suddenly, and we hustled ashore and telephoned to Dr. Lawrence, who responded very promptly. In fifteen minutes he had our friend out of pain and asleep, and promised he would be all right in the morning. There was a fresh westerly breeze with rain during the night. We were up at dawn in the morning. Lashed the dinghy on the fore deck, up sail and underway at 6.05 A. M., New York time, September 13, but as our watch was set to Halifax time we called it 7.05 A. M. Hazy morning. Light westerly wind.

A. M.	Course	Log	Distance Naut. Miles
7:05—Left City Island, N. Y.	E. x S.	0	0
7:14—Passed bell off Hart's Island	N. E.		0000.8
7:38—Passed Execution Rock	E. x N.		3.3
8:07—Streamed log off Hempstead Buoy	E. x N.	0.0	6.0
8:29—Passed Matinicock Point	E. x N.	2.3	8.4
9:34—Passed Lloyd's Point	E. x N.	10.3	15.9
10:02—Eaton's Point—altered course	E. ½ S.	14.1	20.1
12:00—Fresh westerly wind and heavy wind lop. Altered course	E. ¼ N.	27.8	
P. M.			
12:07—Passed 1½ miles south of Stratford Shoal	E. ¼ N.	28.5	34.6
4:00—Strong west wind and moderate sea	E. ¼ N.	59.7	
4:03—Passed Cornfield Lightship	E. ¼ N.	60.3	69.3
5:15—Passed 1 mile south Bartlet's	E.	71.3	81.3
5:30—Blowing very hard. Took in mainsail			84.9
6:00—Passed Race Rock under jib. Very nasty sea			84.9
6:30—Put on small jib and storm trysail	E.		
8:00—Strong west wind	E.	88.1	
9:26—Block Island Light abeam	E.	99.7	100.4
10:25—Point Judith Light and automatic buoy in line	E.	103.6	
12:00—Strong westerly wind. Heavy chop	E.	115.0	
A. M. SEPTEMBER 14			
1:20—Passed Sow and Pig's Lightship	E. x N.	124.3	133.9
2:30—Passed bell buoy	E. x N.	132.3	140.7
4:00—Strong west wind and choppy sea	E. N. E.	140.2	
6:43—Cross Rip Lightship	E x S. ¾ S.	156.9	168.0
8:00—Passed Handkerchief Lightship	E.	164.8	176.5
9:08—Passed Pollock Rip Lightship vessel and set course	E. & N. ¼ N.	170.0	184.1
10:20—Put big jib on with trysail			
12:00—Fresh northerly moderate sea	E. x N. ¼ N.	190.4	
P. M.			
4:00—Same weather	"	219.0	
7:00—Put small jib on with trysail for night	"	239.0	
8:00—Light northerly and moderate sea	"	244.4	
12:00—Very light northerly	"	247.7	
A. M. SEPTEMBER 15			
4:00—Same weather	"	255.6	
8:00—Fresh northerly	"	278.5	

(*Continued on page 320*)



THE PICTURESQUE BISCAYNE BAY YACHT CLUB AT MIAMI

The Most Southern Yacht Club in the United States

By ALFRED JOHNSON

WAY down under the shadow of the Tropic of Cancer is tucked away a yacht club of which very little is heard by Northern yachtsmen, though it is one of the most active and progressive clubs in this country, and has a reputation for hospitality that can be vouched for by many of those who have followed the long Florida route with their motor boats during the winter months, and have been pleasantly surprised at the club facilities which they found at the Biscayne Bay Yacht Club, at the extreme south end of their voyage.

The Biscayne Bay Yacht Club situated on Biscayne Bay, Florida, is a winter one, its season being from the first of January to the first of May. Its burgee bearing the emblem 25 N. referring to its latitude, shows it to be the most Southerly of American yacht clubs. It is emphatically a cruising rather than a racing club, and a yachting as distinct from a social organization.

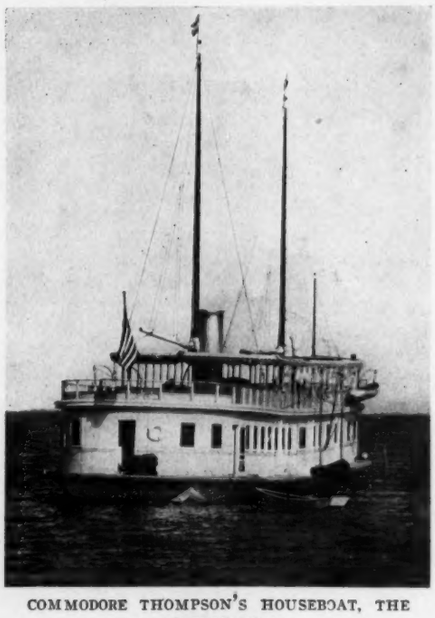
Its flag has twice been carried around the world, and has been seen in every yachting water of this country, from Labrador and Hudson Bay to the Panama Canal, while one of its yachts has just made a trip around the Horn to San Francisco.

The Biscayne Bay Yacht Club was proposed, and preliminary steps towards its organization taken in May 1887, at Cocoanut Grove, Fla., by R. M. Munroe and Kirk Munroe, the well-known author, the two oldest settlers of the place, though in no way related. The first regular meeting was held in December of that year at Mr. Kirk Munroe's house, where eleven charter members signed the roll. R. M. Munroe was elected Commodore, and held that position until 1909, when he resigned and was succeeded in office by Colonel Robert M. Thompson. He in turn resigned during the present year, and was succeeded by William J. Matheson of New York City and Cocoanut Grove.

At that first meeting Kirk Munroe was made secretary, and though he has many times since attempted to escape the office, has not yet succeeded. Having thus held the position for twenty-five consecutive years he is now, I believe, the senior yacht club secretary of the United States.

The club flourished from the outset, and has borne on its membership lists the names of many distinguished yachtsmen. Among the earliest were, Caldwell Colt, owner of the Dauntless, and Lieutenant Henn, of the America's cup challenger Galatea, George Cormack, secretary New York Yacht Club, Henry M. Flager, and a host of others as well known. Its present membership (active) is limited to one hundred, and there is always a waiting list.

Although the club was established at Cocoanut Grove, where it still maintains its original club house, it was found advisable in 1909, owing to the unprecedented growth of the city of Miami, which did not come into existence until the Biscayne Bay Yacht Club was nine years old, to build a second club house, six miles further up the bay, in Miami, at the foot of Eleventh street. Another urgent reason for this was to accommodate the increasing number of yachts that came South every winter and stopped for a longer or shorter time at Miami. From twenty-five to thirty are to be found in front of the club every day, and their monthly tonnage even exceeds that seen in front of the New York Yacht Club at Newport through the summer months.



COMMODORE THOMPSON'S HOUSEBOAT, THE EVERGLADES

This house is an attractive, concrete structure, built on substantial arches and extends out over the water. Its low sloping red tiled roof, prolonged to cover its broad piazzas, gives a bungalow effect. A pier and floats run out from the front piazza into water deep enough to allow Col. Thompson's houseboat, The Everglades, of 257 tons burden, 111 feet long, to lie there comfortably while filling with water and gasolene, which is fed by gravity through pipe lines to the end of the dock. This arrangement, the result of Rear Commodore Jones' enterprise in procuring the co-operation of the Standard Oil people, enables visiting yachtsmen, after obtaining a card from a member, to fill their tanks at current rates, and to take on all other supplies.

It may be well to say here that the secretary of the club, Mr. Munroe, is an all-the-year resident at Cocoanut Grove, and Rear Commodore Jones has a cottage at Miami, where he spends his winters. Both of these gentlemen are always willing to give visiting yachtsmen any information

BISCAYNE BAY FROM THE YACHT CLUB PIER

they may desire, whether in regard to the fishing, shooting or cruising grounds.

If Mr. Munroe may be considered as the father of the club at Cocoanut Grove, it is perhaps not too much to say that the energy, enterprise and incessant hard work of Mr. Jones, together with the friendly welcoming hand he always extends to visitors, has done much to make the Miami club house what it is. Commodore Jones has just ordered for the coming season a number of old railroad car-wheels, which he proposes to put down as moorings for the use of members and visiting yachtsmen, in about five feet of water directly off the club house at Miami. Owing to the shoalness of the water, anchors with flukes or ends, or even big rocks, would endanger the bottoms and propellers of passing boats. These flat wheels will sink into the mud and hold, much as mushroom anchors do. Mr. Jones' idea in using them seems to be a happy one, and well worth imitating in similar surroundings.

To us in the North, five feet seems pretty shallow, but a boat drawing more would be of no use in these waters. In fact, Colonel Thompson told me he considered 34 inches an ideal draught for the region between Jacksonville and Key West. The Everglades, if I remember correctly, draws 54 inches, which means constantly employing local pilots for one who is not acquainted with the waters.

Cocoanut Grove is the most beautiful suburb of Miami, and was a place in which Northern people made their winter homes, or sojourned at the old Peacock Inn many years before Miami was conceived. In those early days people came by schooner from Key West, and got their mails, weekly or bi-weekly, or monthly, as it might happen, by the same route. Mr. Kirk Munroe was the host in those days as now.

Commodore Lewis Quentin Jones came down for the first time in his little auxiliary schooner Et Cetera, equipped with an old style Morris Heights naptha engine. She was the very first power boat seen in these waters, and Mr. Jones was among the earliest pioneers to make the long voyage between New England and Florida in his own cruising boat. So charmed was he with this region that he has made it his winter home ever since, and no one is better informed than he in regard to the many advantages it offers to the yachtsman, fisherman, hunter or prospective settler.

BOATS AT THE MOUTH OF THE MIAMI RIVER

The older club house at Cocoanut Grove is a comfortable two-story wooden structure, built on piles out over the water, not far from the famous grove. It is superfluous to add that the club is in a most flourishing condition, thoroughly alive and out of debt, and in addition is an unusually agreeable social organization. To make a yacht club all it should be, internally and externally, house it properly and then keep it alive, requires no mean order of intelligence, and much hard work. On our entire coast there are not too many such clubs, and this little group of one hundred men on Biscayne Bay may well be pointed to as an example for some of their larger similar organizations.

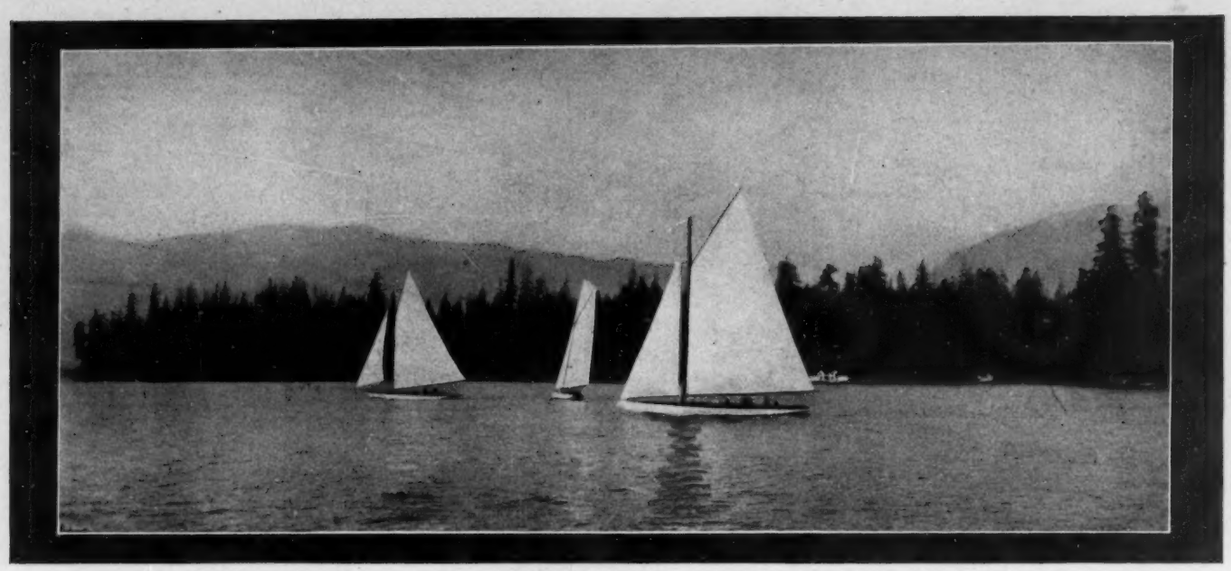
The 1912 Club Book might well be followed by younger clubs about to issue such a volume. It is a model of useful information, clearly put and logically arranged. An article by the Club Piscator tells in a few brief paragraphs just what any fisherman, contemplating a trip to those waters, would wish to know; and it strikes me as being not out of place to give a few extracts from it here. It says:

"Fish of many varieties and in infinite numbers swarm in Biscayne Bay and adjacent waters. Some of them are gamy to a degree, notably the superb tarpon and the plucky little bonefish who fights for his life to the last gasp. Others, such as the pompano and Spanish mackerel, stand in the front rank of food fishes, while the edible varieties may be numbered by the score.

"While myriads of fish may be had for the taking from these waters during every month of the year many of them are migratory, coming and going with their appointed seasons. The world-famed tarpon, for instance, is rarely seen during the winter months, but begins to appear in March, and during the next three months swarms in the cuts leading into the Bay or separating the Keys, and in the mouths of the rivers. He is a huge fellow, weighing from 100 to 200 pounds, having silvered scales as large as the palm of one's hand, and will fight for hours before allowing himself to be brought within reach of the gaff. He is generally taken on a troll with mullet bait.

"Bonefish: This joy of the angler's heart runs from five to ten pounds in weight, and is the gamest fish of its size found in any waters. It feeds on shallow, grassy flats, and is

(*Continued on page 321*)



"ALEXANDRA, SPIRIT, AND SPIRIT II GHOSTED ALONG IN THE LIGHT BREEZE THAT PREVAILED"

A Thrash Across the Gulf of Georgia

With the Royal Vancouver Yacht Club in Calm and Storm

By G. B. WARREN

LATE last spring—somewhere about the end of May, to be exact—a fleet of twenty sailing yachts and fifteen power cruisers flying the Royal Vancouver Yacht Club burgee crossed the Gulf of Georgia from Vancouver, B. C., to Nanaimo on Vancouver Island, in a race over for three cups put up by Commodore B. T. Rogers.

The Vancouver Yacht Club is one of the "livest" clubs on the Pacific Coast, and the waters around Vancouver are ideal for week end cruising races, there being a number of good harbors within fairly easy cruising distance, so that the club holds a number of these events during the season. The sailing fleet was classed in two divisions, and started from Point Grey at 9 A. M., and the power cruisers in one class left fifteen minutes later, the flagship Aquilo acting as starter. All classes were handicapped on past performance.

It was a beautiful day for the start. A light southerly breeze enabled the yachts to lay their course close hauled at the start; but as the day advanced the wind hauled more easterly, balloon jibs were broken out and towards the end spinnakers were carried also. The wide reaches of the gulf were calm as a pond, with not even the suggestion of a ground swell in the morning; but as the hours wore on the wind came fresher from the eastward, and the roll that began to come up gave indications of more wind behind. The three international racers Alexandra, Spirit and Spirit II, all built to compete for the Alexandra Cup under the 29-foot international rule, ghosted along in the light breeze that prevailed at the start, and were soon well ahead of everything else; but the gradually freshening breeze brought the rest of the fleet hard on their track. Spirit II, which was first across the line at the start, led all the way to within a mile or so of the finish. With a list of 20 degrees, mainly from the weight of the crew on the lee side, she slipped along so easily that the power boats doing ten miles or better took a long time in passing her. She was followed hard by Alexandra, which by clever handling got the lead in the fluky conditions that prevailed in Fairway Channel and slipped over the finish line first, with Spirit II in second place. Spindrift got third on time allowance and Spirit I fourth place, with the rest of the fleet pushing hard.

ALEXANDRA

SPINDRIFT

ADELPHI

In the cruiser class Rear Commodore Breeze's little seabird yawl Tamerlane won on time allowance with the schooner Adelphi in second place and the yawl Eileen third. The schooner, which is 43 feet overall, sailed a great race, beating everything, boat for boat, except the Alexandra and the two Spirits. The last arrivals of the fleet came plowing along in great style, and nearly all were anchored in Nanaimo and snugged down by 6 P. M.

The power boats, of which there were thirteen racing, had an exciting time among themselves. Leonard M., Wyrill and Davy Jones led the fleet into Nanaimo, but honors went to the bunch of smaller cruisers who hung together all the way over. Arranmore was first, Elgomar second and Vaquero third.

A pleasant evening was spent at Nanaimo; but next morning those who rose early scented trouble on the breeze. Hard, oily clouds sailed overhead, and the sheltered harbor was white with snappy wave crests. The Rear Commodore was observed sweeping the offing with his glasses, and the inspection did not appear to be reassuring. The rocky outline of Snake Island was edged with surf, and far out in the open long ranks of white caps rolled northward.

SOME OF THE POWER BOAT FLEET ON THE WAY TO NANAIMO. WYRILL AND LEONARD M ON THE LEFT, WITH THE BIG CRUISER DAVY JONES IN THE FOREGROUND

At 7 A. M. the pajama brigade was called out on several of the big power boats to attend to the ground tackle, as they were dragging their anchors, the holding ground in places being poor. A couple of sailing craft also started to drag. The crew of the sloop Spindrift, finding her walking for the beach, deserted the breakfast-table in a body and, putting in a record-breaking reef, clawed off to a more secure anchorage to finish the meal. Then everything was lashed or stowed for heavy weather; and at 8:20 A. M. the anchor was weighed, and rail down we started on the 40-mile windward thrash back to Vancouver.

In the protected waters of the harbor and in the lee of Gabriola Island great time was made, though it was very squally inside, and time after time Spindrift put her cabin ports under, and the crew began to taste the first drifting whisps of salt spray. As the skipper anticipated a more steady wind in the open no further reduction of sail was made, as it takes hard driving to make windward work against the steep, short seas that run on the Gulf of Georgia.

Clearing Entrance Island, Spindrift commenced to get acquainted with the white-capped rollers, and the neglect of the crew to swab down decks that morning was speedily rectified by driving sheets of spray, which, however, only occasionally reached the cockpit. Once in the open the wind settled down to a hard but steady northeast blow. We tacked to take any advantage there might be in the lee of Flat Top Islands and then went about and laid Bowen Island, on the other side of the Gulf, close hauled.

"SPEARING HER BOWSPRIT THROUGH THE ADVANCING WAVES, SPINDRIFT LIFTED HERSELF OVER EACH SUCCESSIVE STEEP"

Most of the sailing fleet were seen to clear Entrance Island about 11 o'clock, and lay straight across the Gulf. They were soon lost to sight in a rain squall and not another sail was seen on the trip. As Spindrift approached the Bowen Island shore about noon the sea began to increase, and there were indications of tide rips. The waves were running six to seven feet high, with barely room for a thirty-foot boat close hauled to drop into a hollow and lift to meet the oncoming sea, while every half hour or so a procession of full-grown rollers would come along, rearing their crests eight to ten feet above the steep and narrow hollows.

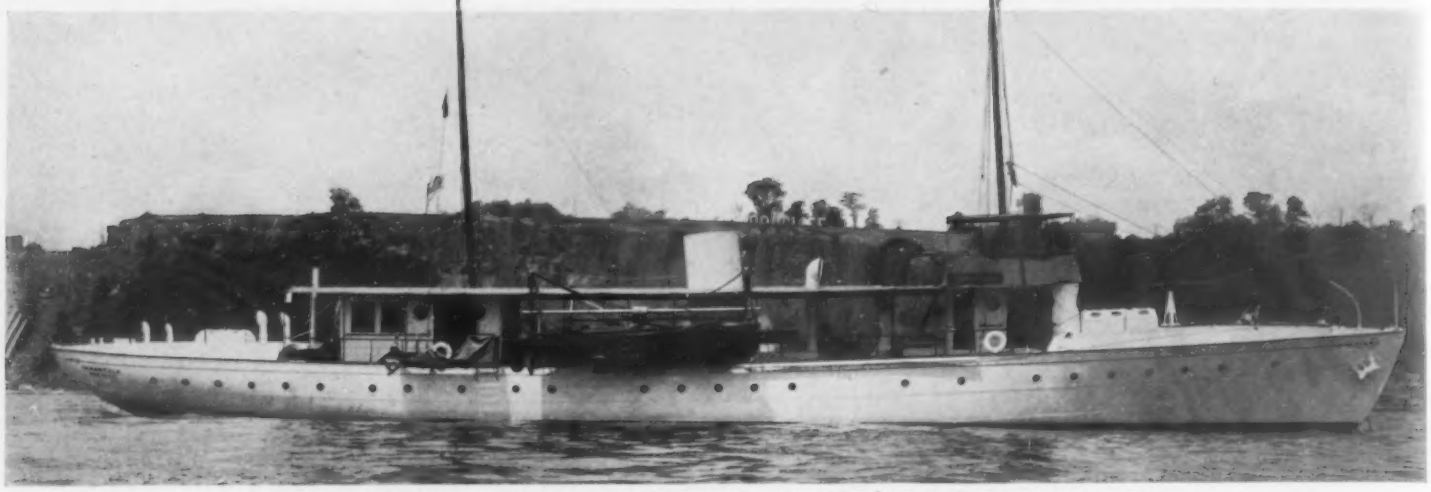
Though spearing her bowsprit through the advancing waves Spindrift lifted herself over each successive steep with only occasional drifts of spray showering aboard, though occasionally taking a broken crest over the lee coaming into the cockpit in the heavier knock downs. She was being driven hard, for having no auxiliary power the most had to be made of the wind, fair or foul; and though the full jib was undoubtedly a little too much for her at times she was eating out to windward in good style, and the wind lightening with the turn of the tide shortly after noon, she carried her sail well.

While in the worst of the sea the 56-foot power yacht Wyrill passed, making a stirring picture, veiling herself in snowy spray that flew high over the pilot house whenever she pitched into an extra steep wave; then, clearing the smother with her bow pointing to the sky, she shook herself free for the next plunge. Several times the plate glass windows of her pilot house were lifted and dropped into their slots by the force of the driving spray, and the forward hatch cover had to be nailed down with canvas to keep the water from working into the engine room; but she made good weather of it, and was followed by the See Bee, these being the only power boats that came across before the weather moderated.

By 6 P. M., Spindrift being down by the Fraser River Sand Heads, the wind had moderated so much that the reef was shaken out of the mainsail, and with varying easterly airs she made up for Point Gray, passing into English Bay at 10 P. M., and anchoring off the Narrows at midnight, the tide being unfavorable.

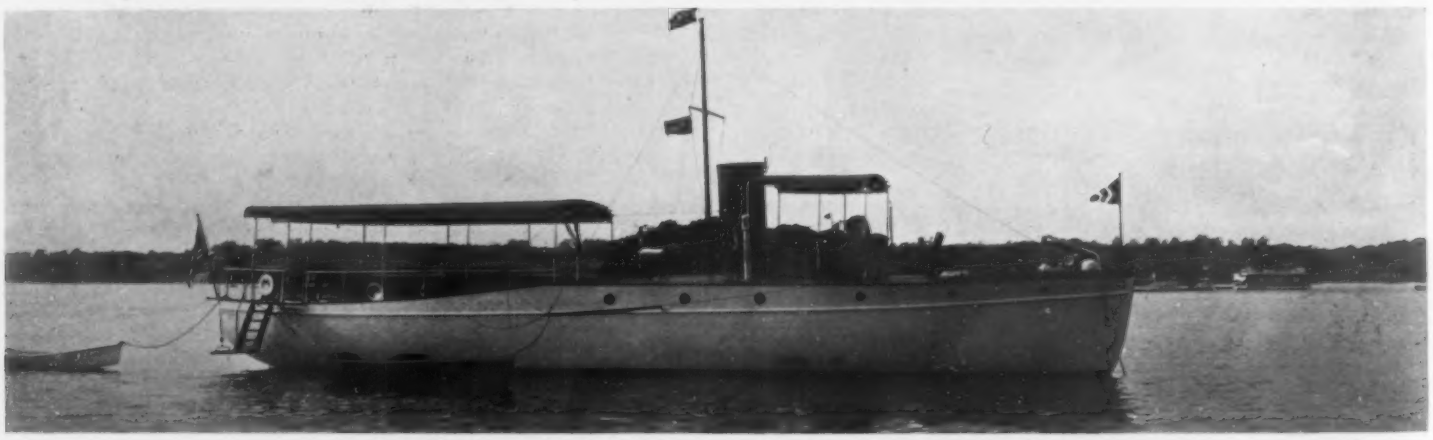
There were some exciting times on the other sailing craft. Spirit, with three reefs tucked down, led the fleet across the Gulf, being one of the few yachts to reach home that day. With cabin ports awash, and darting through the waves like a torpedo enveloped in a whirl of spray, she was driven as never before in an attempt to beat the heavy cruisers. She shipped only one really bad sea, which floated the helmsman off his seat and flooded the cockpit. It was a sort of cross wave that broke over her abaft the main shrouds and swept her clean, but did no damage beyond what water got below through a small hatch aft.

Some New Power Boats of the Year

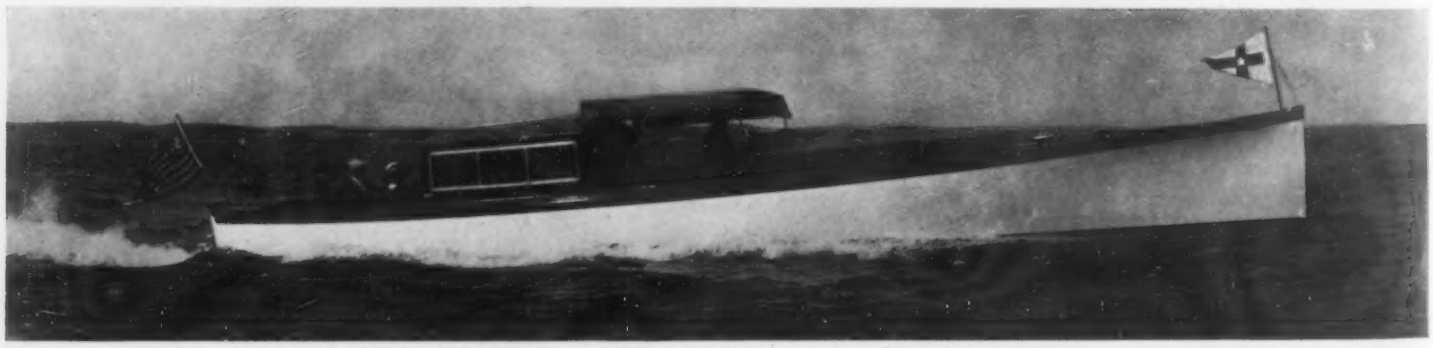


TARANTULA, A 129-FOOT TWIN SCREW STEEL CRUISER, WITH TWO 6-CYLINDER SPEEDWAY MOTORS

COOTER II, A NOVEL 44-FOOTER, WITH A 4-CYLINDER MURRAY & TREGURTHA ENGINE



ATHENA, A COMFORTABLE 60-FOOTER, POWERED WITH A 4-CYLINDER STERLING



FAD, A FINE TYPE OF FAST DAY BOAT, POWERED WITH A 6-CYLINDER STERLING

A Long Cruise in a Little Ship

From Maine to Sandy Hook in a Twenty-one Footer, and the Adventures that Befell on the Way. Part II.

By THE MATE

The first installment of this cruise covers the trip from South Freeport, on Casco Bay, Me., to Plymouth, in the little 21-foot knockabout Widsith, the crew being composed of the skipper and his wife. In beating down the shore from Boston toward Provincetown in a hard southerly breeze, their only chart of that part of the coast blows overboard just at dark, when they are outside of the Gurnet Light and not sure of their exact position.

WE were now in a nasty predicament, as we had no other chart of that part of the coast, and there immediately arose a heated discussion, the Skipper insisting that Provincetown, which we were trying to reach, bore in a certain direction, and I declaring it to be in another. In fact, I had really caught a glimpse of the standpipe on the end of the Cape, but the Captain, with fine scorn, insisted that it was a vessel, as the Cape did not lie in that direction at all.

Having no chart and not knowing the waters, neither of us could prove our contention, so as it was fast getting dark we decided to make some nearby port as soon as possible. We remembered seeing, just before losing the chart, a channel buoy beyond Gurnet Point, but had no idea to what harbor it led. We hunted it up now and rounded it, following channel markings towards a red light.

Darkness overtook us, and the skipper, again handing the wheel over to me, went up forward, swinging the lead every few minutes and shouting back instruction to me. In this manner we felt our way cautiously into the strange harbor in pitch darkness, nosing the mud a couple of times, but getting off safely and working all the while towards a group of lights on shore, which we took to be the town.

Presently we saw ahead of us the lights of a tug with a couple of barges in tow. With their searchlight they were picking up the buoys and finding their way slowly up the channel. This gave us a lead, and we followed them in and anchored just to one side of the channel in about 12 feet of water. After a hasty dinner we turned in and slept soundly.

I awakened first the following morning, and as soon as I became conscious was aware of a strange list to the boat. So I roused the Captain, and we looked out to find ourselves hard aground in a perfect wilderness of eel-grass, the channel itself being the only part of the harbor with enough water to float in. We busied ourselves about breakfast, and by the time the "chores" were done we were afloat again on the rising tide. (Who says tides haven't their advantages?) As we wanted another chart and some supplies we decided to move up the channel to the town, which we could now see. In answer to our inquiries about an anchorage, some men sitting on a wharf shouted directions, and we soon came to anchor again near a steamboat dock, and in front of what we later learned to be the yacht club. It was a very poor anchorage for any boat drawing over 2 feet, however. A man came rowing past, and, as we were still in ignorance of where we were, we asked him what town this was.

With apparent contempt for our deep ignorance, he answered with great pride: "Why, this is Plymouth, where the Pilgrims landed in 1620; and over thar is the Rock," pointing to a lump of granite under a stone arch. Imagine our chagrin!

It being Sunday we couldn't find a store open where we could purchase a chart, but the members of the Plymouth Yacht Club were very kind and gave us a look at their charts. By this we figured out that the previous day's trip had covered about 35 miles. At the club they also gave us some directions and advice, and we made up our minds to start right out again.

It was blowing hard, so we tied two reefs in the mainsail and bent the storm jib. Going out we found the channel narrow and crooked but well marked. We passed several large power boats which had seemingly put in to wait for better weather, something we could not understand till we got outside ourselves.

We went flying down past the Duxbury light and then hauled on the wind and laid our course for Provincetown. Though not yet out from under the lee of the land we began to feel the force of the wind and encountered a hard chop of sea. By the time we were half-way out to the end of Gurnet Point we found the seas were very heavy; they would break aboard forward and deluge the cabin house and cockpit with spray. We held a consultation and decided that if it was so rough in here it would be still rougher further out, and so we turned back reluctantly, thinking it wiser to spend the day comfortably in Plymouth. This turned out to be good judgment, as it blew half a gale all day, and by the time we got back off the yacht club we were thoroughly wet down.

Being detained in this historic spot into which we had blundered, we decided to take advantage of the fact and see the town, so we went ashore bent on sightseeing. In the afternoon it started to rain, and after getting aboard again the Captain went into the yacht club to pick up more information. He was advised to stay in Plymouth until we got a northwest wind, and then to go directly around Cape Cod without stopping in at Provincetown at all. This they claimed would be quicker than going in and making a fresh start from Provincetown harbor, where you have to sail almost every point of the compass to get out. Adverse winds or tide, or both, if encountered off Race Point especially make it a tedious job getting round, so they said. However, we decided to stick to our original plan and go to Provincetown, anyway.

When we turned out early Monday morning we found the weather clear and the wind gone down to a light breeze. We got under way as soon as possible after breakfast, and running down the channel into Cape Cod Bay laid our course due east for Provincetown. The wind freshened out of the South, and as we got out from shore we ran into a mist which quickly swallowed up Gurnet Point, and for some hours we saw no land in any direction. Finally we picked up the tall monument on the end of the Cape, and the standpipe, and shortly after ran into the harbor and up near the long, high wharves, anchoring in about four fathoms of water, and adding twenty-five miles more to our record.

Provincetown harbor is rather rough for small boats like ours, especially with the wind in this direction, and as the breeze had freshened we found our anchorage rather uneasy. We were on the point of starting ashore when the Skipper noticed the revenue cutter Gresham just coming to anchor in the harbor. He had a friend, a young Lieutenant of Engineers on the ship, so took the dory and rowed over to see if he was on board. Finding him there he visited for a few minutes and then returned with an invitation to dine on the Gresham. We were glad to accept, even though we had no "glad rags" for the occasion. We spent a very enjoyable evening and gathered some valuable information about our coming trip around the Cape, besides which they gave us a chart to replace the one we had lost.

Three o'clock Tuesday morning saw us up getting breakfast, and by a quarter to four we were under way to take advantage of a fair tide and moderate northwest breeze, which was just the condition we had hoped for. We worked around Long Point, Wood End and Race Point, keeping quite close to shore and making good time, and then started sheets for the run down the coast. The captain pulled the "dink" up on the stern, so we would have that much less drag, as every little bit helps in a long run of 70 or 80 miles, such as we had before us. We kept track of our speed by checking off on the chart the different life

"WE RAN INTO THE THIMBLE ISLANDS"

saving stations as we passed them. They are many and close together on this exposed strip of shore, and one sees them nestling in the sand dunes, sometimes almost hidden from view among them.

About noon we were off Chatham Bar at the south end of the Cape, where the wind went flat, and we rolled and slatted around aimlessly for a while, till it came up out of the southeast. The tide was starting to flood, so we decided to beat down along the shore of Monomoy and take advantage of it going through the Slue. A large sloop carrying light sails was off Chatham Bar about the same time we were, and she made a long hitch off shore to go around Pollock Shoals Light vessel. When we made Pollock Rip lightship, we met her again and came through side by side to Shovelful lightship.

By this time the wind had hauled and was blowing up strong out of the southwest. This, working directly against the strong tide, made a rough and nasty set into which we dove. At times when the sloop was in the trough of a wave we could see nothing but her sails, and we must have been almost invisible to her a good part of the time. Once I saw those aboard of her looking back after us with their glasses to see how we were getting on, but we were making about as good weather as they. They took in everything except mainsail and jib, but it was so rough now that we decided to lug sail rather than try to reef where we were. It was one of the roughest stretches of water we had encountered and we had a thorough shaking up. We took practically no solid water aboard but were smothered in heavy spray all the time, and though we had the hatch and cabin doors tightly closed, knowing that our decks leaked did not tend to make us very easy in our minds.

After we rounded Shovelful light vessel and started to beat to windward for Handkerchief lightship, we found it so rough and were so wet that we thought best to abandon our first plan of going on to Vineyard Haven, which was 26 miles further, and make for Nantucket only 16 miles away. Besides, we could see Great Point, Nantucket, on the horizon, and any old port looked good to us then, even though it was a little out of our direct route. After a long, hard sail during which we had to pump out frequently, a risky and arduous task, as the pump led to the side deck instead of the cockpit, we reached the entrance of Nantucket Harbor and squared away to run in between the jetties.

The poor dinghy, which we had put overboard again off Monomoy to give us more room on deck, long before this time was half full of water and had been a serious drag, but it was absolutely impossible to bail her out in that sea. She was yanked along, standing on her stern most of the time, and several times we thought we would lose her. But the painter was strong, new rope and held all right. It was a great relief to get in between the jetties, as it was the first smooth water we had had in about five hours. We ran in behind the lighthouse and dropped anchor near the town dock in a well protected spot in about three fathoms of water, completing our longest day's run.

When we opened the cabin doors a cheerful sight greeted us. There were four inches of water above the cabin floor and everything portable was floating around in it. To make matters worse, the kerosene had shaken out of the stove and we could see the oil floating around on top of the water where our belongings were swimming. We pumped out, put out cushions, blankets and things to dry in the wind and started the stove inside. In about an hour we had the cabin fairly presentable again and pretty well dried out. We debated whether to go ashore for dinner and to spend the night in some hotel, but we were both too tired out to put on shore togs and row in. By the time dinner was over we were more than ready for our bunks, so we turned in after a strenuous day in which we had made a run of 70 miles in 14 hours. We felt that having rounded the Cape the worst of our voyage lay behind us, as the run we had just made was the longest stretch on which there was no port into which it was convenient to duck.

We slept late the next morning and awoke to find it a beautiful day, but with no wind. We went ashore to get some stores and look around the town, which we found a quaint and interesting place. We regretted that we could not linger on the Island and go over to 'Sconset, but as we had hoped to make the whole trip in eight days and were already three days behind our schedule we felt we had to get on.

About eleven o'clock we got under way with a very light breeze, but soon found we could not get out of the harbor against the flooding tide, so we had to drop anchor again. About one o'clock a nice breeze came up out of the southwest and we started at once for Vineyard Haven, laying our course from the end of the jetty across the shoals to East Chop. The run seemed tranquil and peaceful in contrast to the tumult and hard work of the previous day.

We arrived off Oak Bluffs about five-thirty and were tempted to go in to Lake Anthony, but as the breeze still held good we kept on. We were told later that Lake Anthony affords good anchorage for boats of not over five feet draft. Keeping on past East Chop we ran into Vineyard Haven harbor and up to the breakwater at the inner end, behind which we found excellent anchorage in about ten feet of water. It was a short day's run and we only added about 26 miles to our log.

Vineyard Haven seems a veritable graveyard for ships. We could see two old wrecks going to pieces in near the shore, remains of others on the beach, and one schooner lying near us heavily laden with lumber was evidently abandoned and in a sinking condition. We heard later that she had run aground on Hedge Fence, a dangerous shoal near here, and had sprung a leak and had to be towed into the harbor. As we went out the next day we saw a schooner in trouble, evidently aground off East Chop with a revenue cutter standing by.

It was with a moderate southwest wind that we rounded West Chop the next morning, headed for Wood's Hole and beat down past the Elizabeth Islands. The day was slightly hazy, but we could see Gay Head standing out in all its beauty in the distance. Passing Cuttyhunk we could make out Vineyard Sound lightship dead ahead, but it was getting hazy rapidly, and by the time we

reached the lightship we were completely shut in by it.

From the lightship we laid our course west-nor'west so as to bring us up just inside of Point Judith. We sailed along on this course for several hours with a fresh breeze and in quite a sea, and then began to look for signs of land. For all we could see or hear we might have been the only living creatures on this side of the globe, as we did not see even a sea bird. It was nearly four hours after losing sight of the lightship in the fog before we saw any sign of life at all, and then we passed a government transport outward bound from Newport.

Shortly after this the haze lightened a little, and we saw Brenton Reef light vessel to leeward and then Narragansett Pier ahead. We ran in close up to Point Judith Neck and then tacked and headed for the end of the point. But about six o'clock the wind petered out and we just rolled around, making little progress, as what air there was kept slatting out of the sails as we rolled. Soon after dark we rounded Point Judith and picked up the lights at the entrance of the breakwaters built here to make a harbor of refuge. Working our way in we found several tugs and barges laid up for the night, besides half a dozen or so small boats. The latter were lying well up in the outer curve of the breakwater to be out of the way of the tugs, so we dropped our hook near them, and while the Skipper made things snug for the night I prepared supper. Right after this was disposed of we turned in and had a good night's rest, finding it a very comfortable anchorage. Thirty-seven miles was added to the growing record of our trip by that day's sailing, and we were now back in familiar waters.

"THIS IS PLYMOUTH, WHERE THE PILGRIMS LANDED, AN' OVER THAR'S THE ROCK"

Friday morning we were up for an early start, only to find a flat calm with the water like glass. It is a curious coincidence, but, though Point Judith has rather a bad reputation for rough water, the three times we have been there we found it quiet and calm. We took our time over breakfast, and then gave the boat a thorough scrubbing down and overhauled some of the rigging. About nine o'clock we saw signs of a breeze outside and started at once. We had hardly steerage way for a while, but managed to work slowly down the coast toward Fisher's Island. After a couple of hours the wind freshened, and we worked down past Watch Hill and entered Fisher's Island Sound about two o'clock. It seemed like a millpond to us there, after having been outside so long, and we experienced a feeling somewhat like relief that our ocean sailing was over for a while.

We had a nice run through the Sound, passing New London just as pleasure craft of all sizes and descriptions were running in to see the boat races. We rather wanted to go, too, but figuring on how much the delay would cost us, we resisted the temptation and went on past. We did not gain much, however, for about five o'clock the wind again went flat and left us about three miles from Saybrook breakwater, where we were trying to get in for the night. The tide was running out strong, and we soon found ourselves starting to go backwards, so the Skipper got out in the dink and towed in past Hatchett Reef to Hatchett Point, where we anchored near the shore, knowing that if it came on to blow we could easily run in behind Saybrook breakwater. Our anchorage proved a most uneasy one, the boat rolling a good deal on account of the amount of traffic going past from the races, and we had to pull the "dinky" up on the deck across our bow to get any peace at all. The distance run that day was 34 miles, but with any luck at all in the way of wind we should have made much more than that.

Saturday dawned with but little wind again, but we got under way early to make all the distance we could. We ran slowly down past Saybrook, and passing inside Long Sand Shoals were off Faulkners Island about noon. The sun was very hot, and as we drifted along we decided to take a swim, it being the first time since our start from Maine that the weather had been warm enough to make one inviting. There were three other small yachts becalmed near us, and about three o'clock one of them decided to get the "dink" out in front and tow, and soon we were all following suit. The Captain had not been employing the ash breeze very long, trying to get into the harbor at Sachem's Head when a freesh breeze came up and he tumbled aboard again. We trimmed our sails and ran into the Thimble Island, as we were running short of provisions and wanted to see if there was any mail for us at Stony Creek. We anchored in the harbor off Money Island, under the watchful eye of "Leo the yachtsman's friend." Owing to the light wind we had put only 22 miles behind us in the whole day's sail, which was disappointing in view of our haste to get home. We had intended to stop only a short time at the Thimbles and start on again, sailing that night. But when we got back from our marketing expedition we found a flat calm again, so decided to stay where we were.

Sunday morning we arose early only to find the same light wind we seemed fated to encounter ever since leaving Point Judith. We got under way at once, but it was slow work, and by one o'clock we were only off New Haven. The balance of that day and the next one we encountered a continuance of the same light conditions, and we worked slowly down the Sound at an irritating speed, finally arriving at College Point Monday night, just too late to get a tow through the Gate; and as it was getting late and the wind went light, we went in behind Hunt's Point to spend the night. We have laid over night both here and at College Point, and found them both wretchedly dirty and uneasy anchorages. The constant stream of traffic in and out the Gate keeps one's boat always rolling, and the water is so dirty, that white paint is in bad shape after only one night's stay.

Tuesday morning we were at breakfast by four-thirty, and by five were sailing around looking for a tow. We signaled several tugs with schooners in tow, but they seemed to think we were too small to bother with. We were getting disgusted and almost ready to start through by ourselves, but the wind was light, and we were held back by the memory of one time when we were opposite Astoria in the midst of the busy morning traffic, lost our wind and started to come through stern first. It was a most uncomfortable experience and one we did not care to repeat, so we lingered around and finally, off Riker's Island, a tug came over and opened negotiations.

Of course their first demand was exorbitant, but the Skipper

"NANTUCKET LOOKED GOOD TO US"

THE SKIPPER

A SHELTERED CORNER OF THE COCKPIT

was too old a hand to be caught napping, and by a good bluff of indifference and independence he finally made a favorable dicker with the tug's captain. After a short look around to see if they could pick up a schooner or two, the tug returned alone and passed us a line that looked big enough for a steamer. The Skipper made it fast, and after warning the tugboat pilot not to go full speed, we started. We were afraid that being so small and light they would tow us under, but the heavy hawser acted like a spring, and we came through very comfortably as far as that part of it was concerned. The crew seized the opportunity, however, to clean fires, and the soot and cinders poured back on us, covering our decks and sails and us until we looked like a couple of coal heavers.

When we got to Governor's Island we cast off and paid the tug and started in to clean ship at once. On the way down the bay we passed near one of the Staten Island ferry boats, and some of our friends on board recognized us in spite of our disheveled appearance. At Stapleton we went ashore and telephoned our family of our safe arrival, and then started on the last leg of our voyage to Great Kills, where we anchored about one o'clock.

Our trip altogether figured out about 403 nautical miles, and was one of the most interesting of all our yachting experience.

The Two Sisters

By JOHN ALLEN CHASE

CHUNKY and squat, stubby and apple-bowed as any old-time whaling ship, sixteen years old and looking much older, there is nothing at a casual glance to attract one's attention to the dingy little 85-tone lumber schooner Two Sisters, of Sackville, N. B.

Yet kicking under the stern of this seedy looking "wood boat" schooner, as they call her down east, are two modern 22-inch three-bladed propellers. Under the cabin in the run, one on either side of the keelson, are two 7½-horsepower single cylinder Mianus engines turning up some 485 revolutions a minute and propelling the vessel through the water at a rate of 3½ knots an hour when loaded and 5 when light.

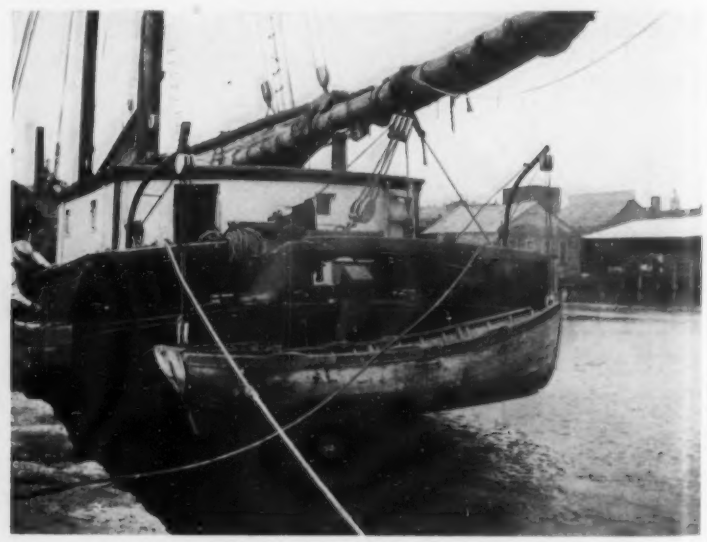
Twin screws on an ocean liner, a man-a-war or a palatial steam yacht would quite naturally be expected, but to be found aboard a little old lumber craft like the Two Sisters is both unusual and unexpected. The cause is not far to seek. Tides in the Bay of Fundy and on the St. John River attain in some places a speed of 7 to 8 miles an hour. For a small, blunt-bowed schooner to buck these, especially against a head wind, is no very easy matter, if it is at all possible. As a result Captain Prichard of the Two Sisters decided to transform his ancient craft into an auxiliary. So he installed the two 7½-horsepower Mianus engines. That was two years ago. From the first the venture proved a success and a number of other small schooners have followed his example until at present they are considered nothing unusual about the ports of Fundy Bay.

They do attract a great deal of attention, however, when by any chance they come around to some harbor in the States, as they do occasionally, freights to ports in Massachusetts being tempting.

The Two Sisters is nothing more or less than a hollow shell. The hold runs clear forward to the bows and to the stern boards aft. There is no forecastle. All hands sleep in the high, box-

(*Continued on page* 321)

ALL HANDS LIVE IN THE HIGH, BOX-LIKE CABIN



THE TWO EXHAUSTS OF HER MODERN GASOLENE EQUIPMENT

A Norwegian Type Off-Shore Auxiliary Ketch

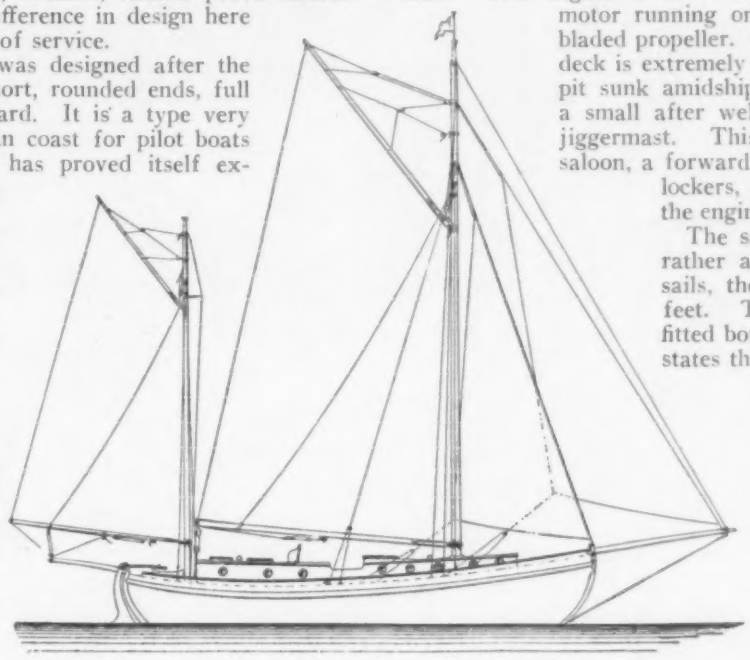
FOLLOWING the series on different types of boats for open water cruising that have appeared in YACHTING during the past year, the accompanying plans of a 38-foot overall sea-going ketch recently designed by Mr. Fred Shephard for Dr. J. J. McMahon of Cork, Ireland, should prove interesting, as it tends to show the difference in design here and abroad for a certain kind of service.

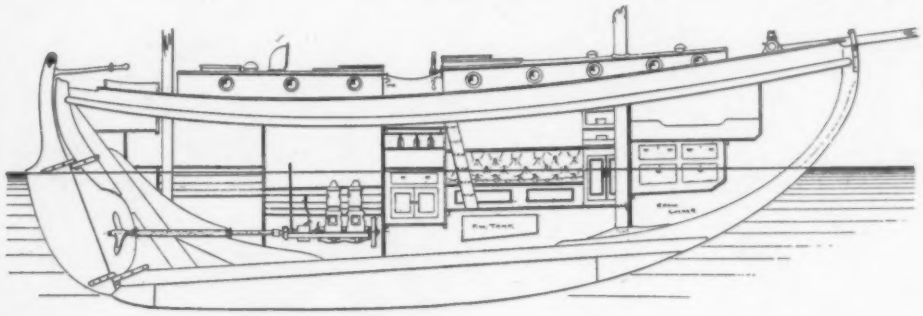
The boat under discussion was designed after the Norwegian type, with very short, rounded ends, full body, and rudder hung outboard. It is a type very much in use on the Norwegian coast for pilot boats and fishing vessels, where it has proved itself extremely seaworthy under the hard conditions that frequently prevail on the coast of Norway, especially during the winter season. A 40-foot pilot cutter of this type will frequently stay out in weather that would try the abilities of large vessels.

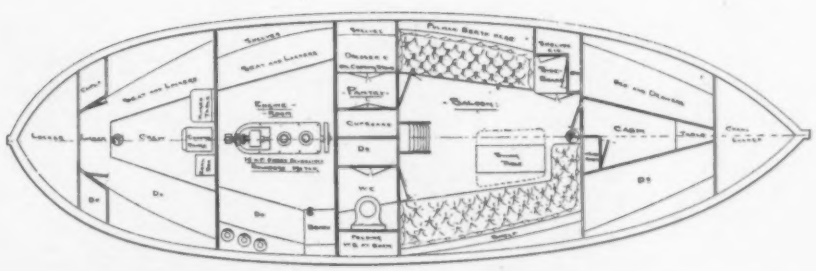
This ketch is 38 feet long overall, 34 feet 2 inches on the waterline, 12 feet beam, and 6 feet 5 inches draft, with an iron keel weighing about 6 tons. There is a great deal of deadrise, the planking coming down practically to the top of the iron shoe, while the sheer is good and the freeboard high. She is classed A1 at Lloyd's for 16 years, and the hull is oak planked, 1¼ inches thick.

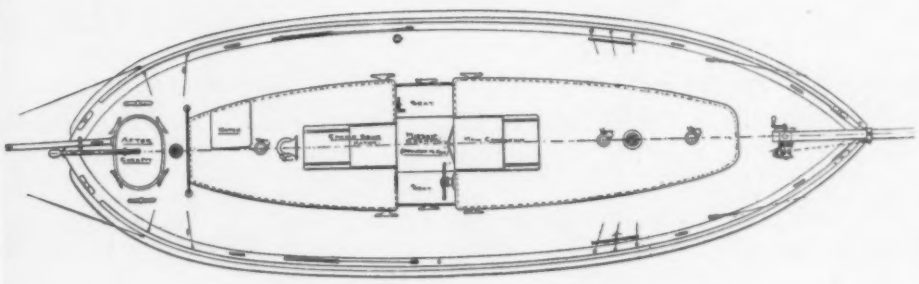
The auxiliary power is a striking feature of the boat and is sufficient to drive her at a good speed even under adverse conditions. The engine is a 16-horsepower 2-cylinder Bolinders motor running on fuel oil and turning a three-bladed propeller. The arrangement below and on deck is extremely novel, there being a small cockpit sunk amidships between the two houses and a small after well or steering cockpit abaft the jiggermast. This arrangement gives a large saloon, a forward cabin, pantry, toilet room with lockers, and crew's quarters abaft of the engine room under the after house.

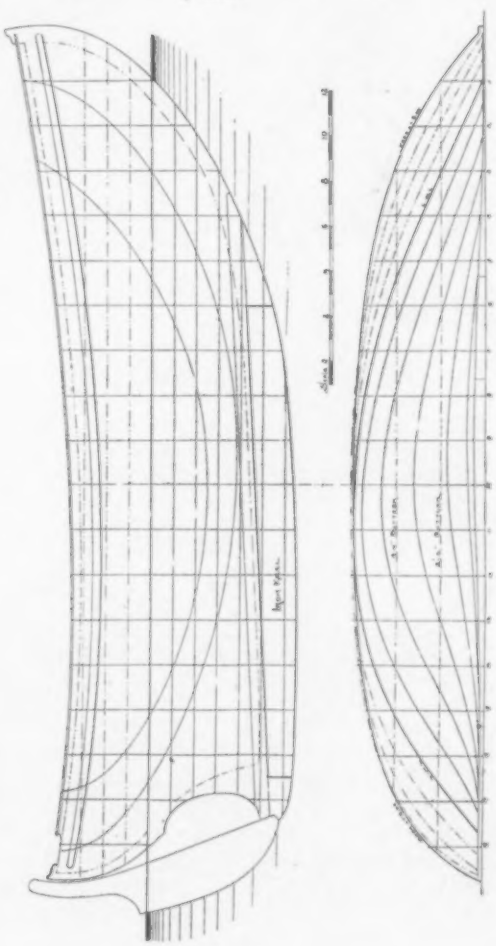
The sail plan shows a ketch rig with rather a large mainsail and two headsails, the total area being 1074 square feet. The boat is very comfortably fitted both inside and out, and her owner states that he is greatly pleased with her behavior under all conditions. She has great displacement, but this has its advantages as it makes her deep, with enough room under the cabin floor for water tanks, and prevents any wash from the bilges wetting carpets and bedding. We are indebted to the Yachting Monthly for the plans.



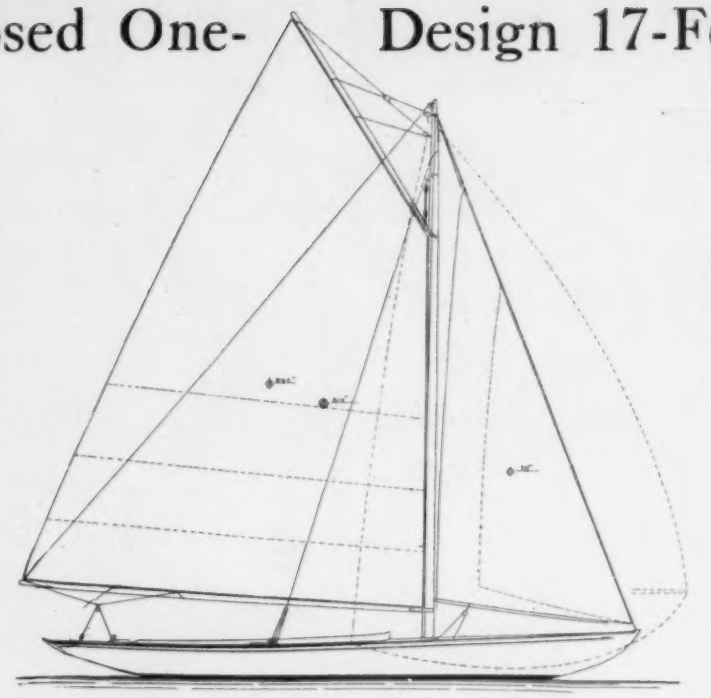








A Proposed One-Design 17-Foot Class



THE plans of the 17-foot waterline one-design class of sloops, which we publish herewith, are from the office of John G. Alden, of Boston, Mass., and are a tentative design for a Long Island Sound Club, that wanted a one-design class of boat this size for racing and for day sailing. The boats are 25 feet 1 inch long over all, 16 feet 10 inches on the waterline, with a beam of 6 feet 6 inches and a draft of 4 feet, all ballast being outside.

The plans show a pleasing little boat with a large cockpit, stylish rig and all the elements of speed. The sail area is 314 square feet, 244 feet being in the mainsail and 70 in the jib.

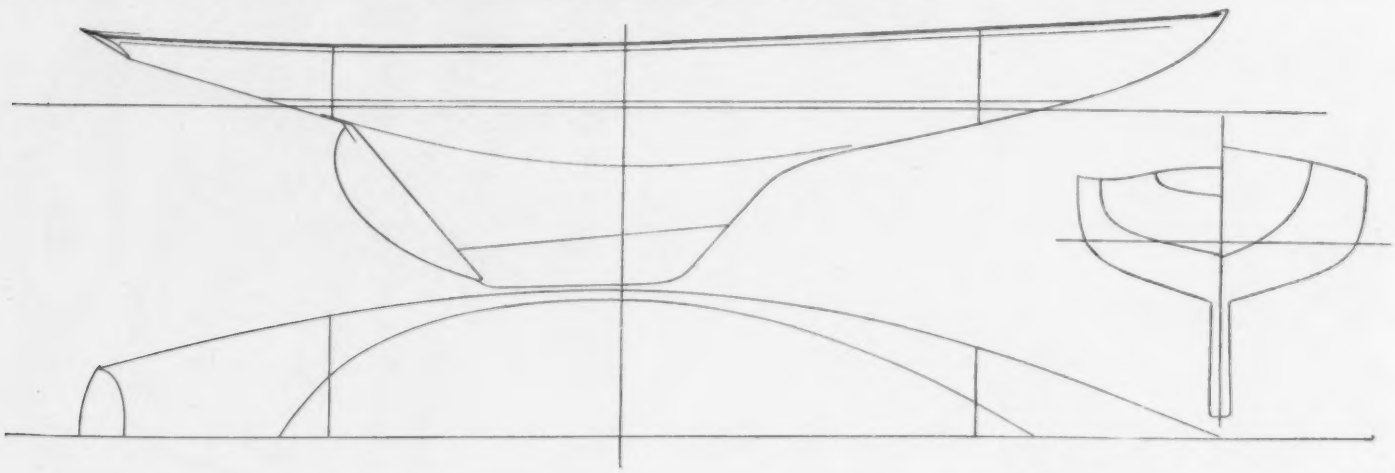
The bilge is hard and the overhangs moderate and fairly full, so that she should get greatly increased waterline and stability as she is heeled, and should carry her sail well.

The boats should make excellent little craft for a one-design class, and they can be built in quantity for a very moderate sum, about $575 covering the cost of the boat as well as the equipment. Being built over the same molds and in lots of half-a-dozen, up, a great saving in price can be effected.

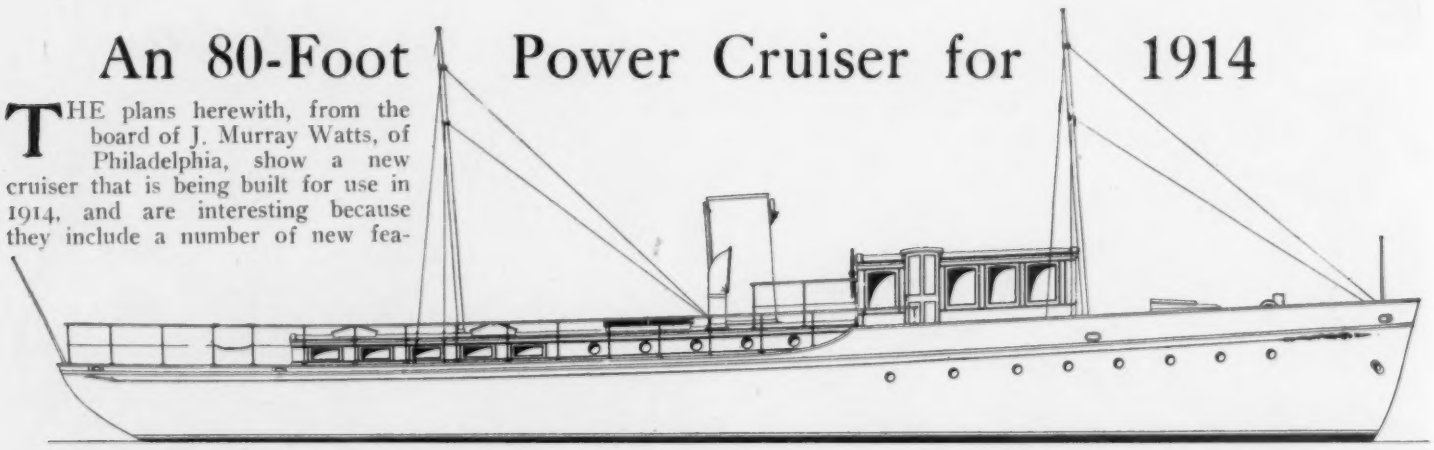
This estimate is for substantial construction, cedar planking and good workmanship.

Decks to be canvas covered and all bright work of cockpit oak. Deck fittings are brass and spars solid.

The sails include spinnaker and a No. 2 jib for such times as it gets "dusty" and reefs are necessary.

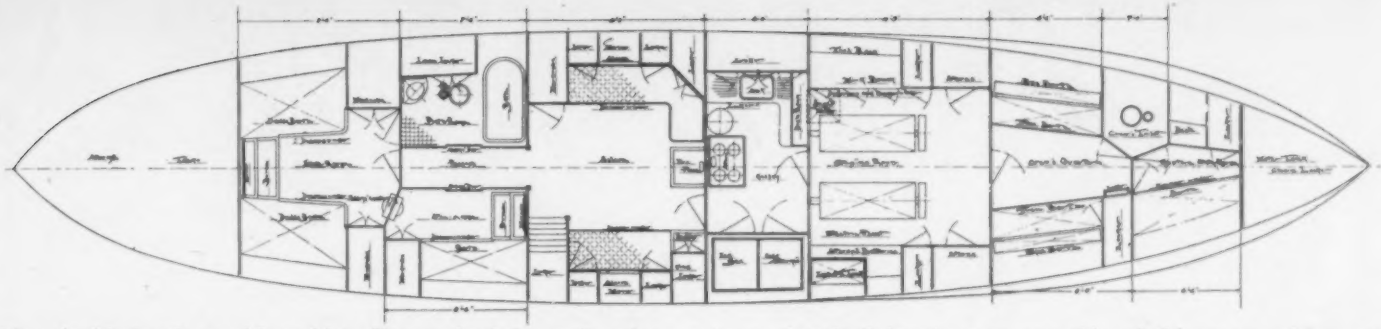


An 80-Foot Power Cruiser for 1914



THE plans herewith, from the board of J. Murray Watts, of Philadelphia, show a new cruiser that is being built for use in 1914, and are interesting because they include a number of new features showing the trend of power boat design. The outboard profile of the boat is very striking and she has the appearance of unusual power, with a raking stem, good sheer, and extremely high freeboard forward, it being 8 feet 6 inches from the stemhead to the water. There is a large deckhouse 14 feet long, aft of which is a cabin trunk with heavy glass ports amidships and square windows aft over the staterooms.

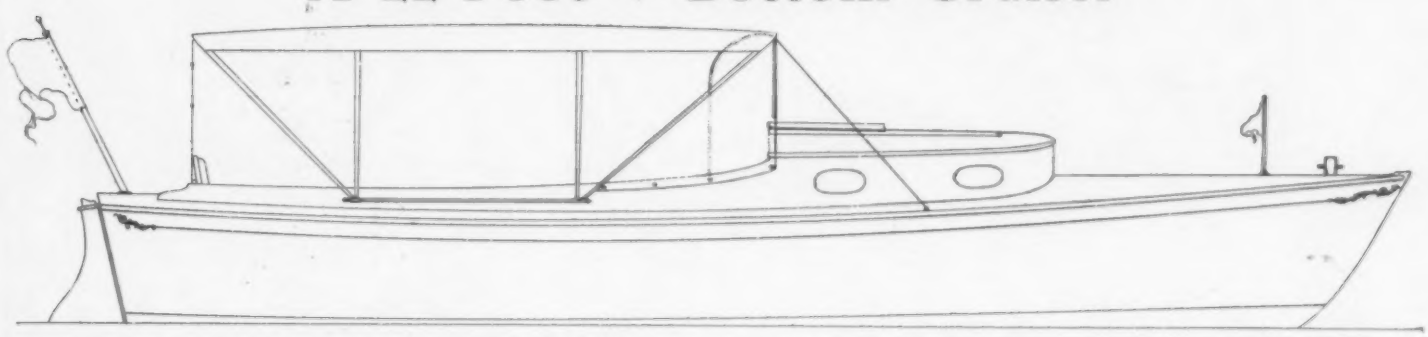
The boat has a generous beam of 16 feet, which makes her extremely roomy below on a waterline length of 71 feet 6 inches. Her accommodations below decks include a large main saloon amidships, 10 by 15 feet, with sofas and lockers on either side, fireplace at the forward end, and buffet and wine locker. Aft of this room is a single stateroom with a large tiled bathroom opposite and a double stateroom aft, extending the full width of the vessel



with a double berth on either side. Forward of the main saloon is a large galley containing an unusual amount of room. The deckhouse will be used as a chart and lounging room, the boat being handled from a bridge on top of the cabin trunk, to which are led all engine controls, etc.

The engine room is just forward of amidships, and here are installed two 40-horsepower motors driving two screws. There is an electric light plant on one side of this room with a work bench on the other. Forward, are the crew's quarters with accommodations for four men and a captain's stateroom. The yacht is very handsomely finished with all deck trimmings of teak, while below the finish is white enamel and mahogany. She is to be built for a Baltimore yachtsman, and will be used mainly on the Chesapeake, with occasional winter trips to Florida.

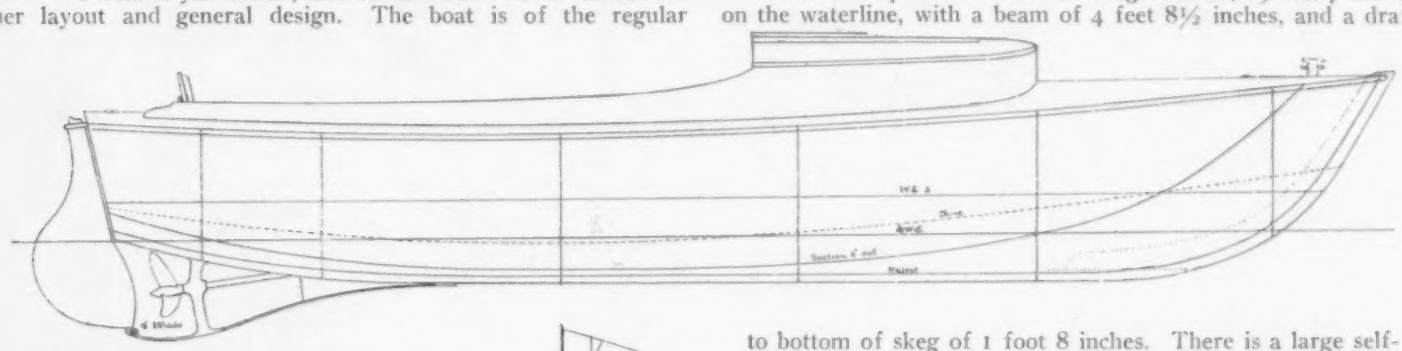
A 22-Foot V-Bottom Cruiser

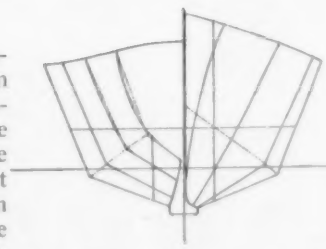


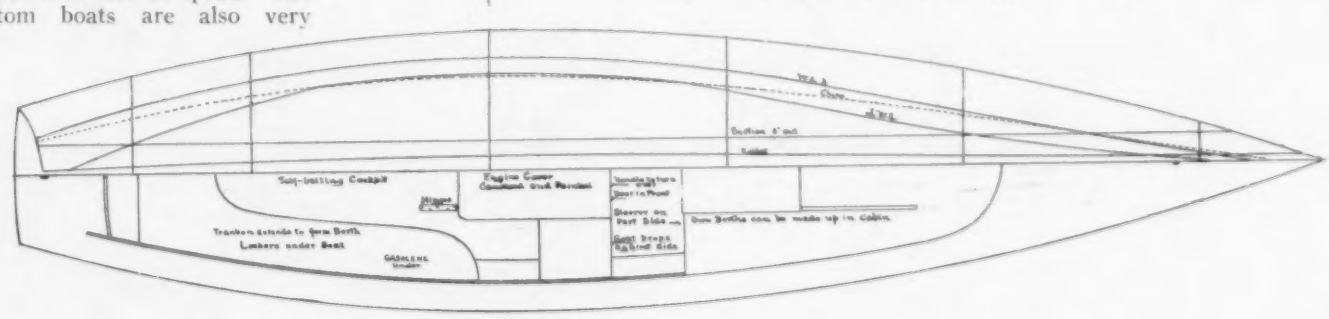
THE 22-footer, the plans of which are reproduced here, was designed by Mr. J. L. Foster of Orcas, Washington, for a Seattle yachtsman, and contain some novel features in her layout and general design. The boat is of the regular Foster V-bottom type, with considerable deadrise to the bottom and a good deal of flare to the topsides. The underlying idea of the plan is to get a boat that will be reasonably dry in a seaway and at the same time can be driven without much loss of speed. The V-bottom boats are also very easily driven and give better results with small power than a regular round bilge boat.

The boat in question is 22 feet long over all, 19 feet 7 inches on the waterline, with a beam of 4 feet 8½ inches, and a draft to bottom of skeg of 1 foot 8 inches. There is a large self-bailing cockpit and a small trunk cabin forward, which gives a single berth on either side for sleeping. The engine is located amidships so as to keep the trim of the boat, and is boxed in with a cover to protect it and to keep the grease and dirt out of the cockpit.

The boat is symmetrical and well proportioned, and she should be an easy type for anyone to tackle who desires to build a boat of this kind himself.



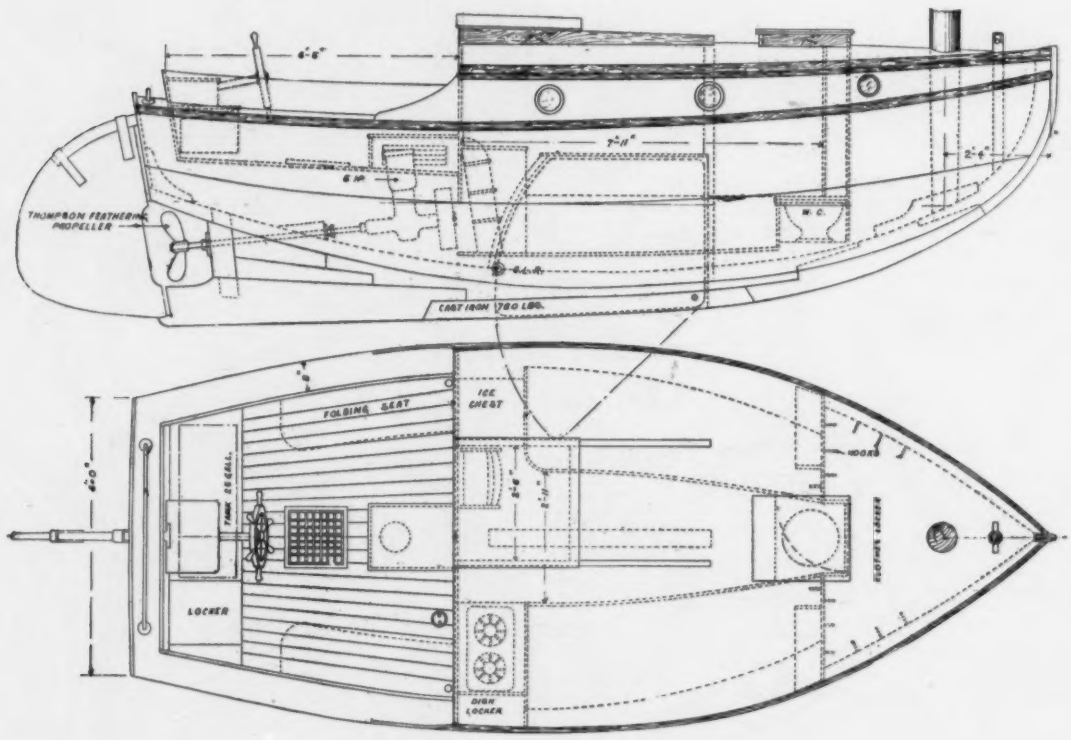


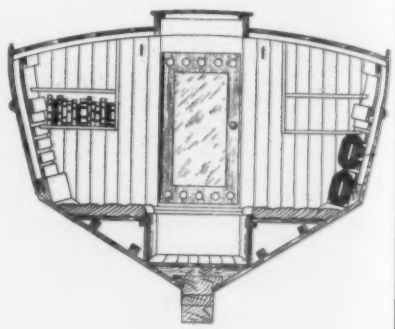


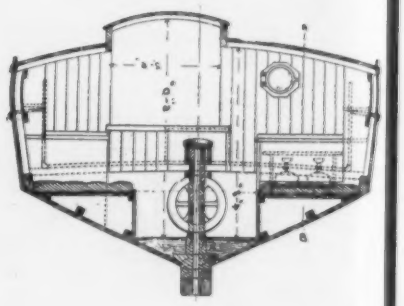
A 20-Foot V-Bottom Auxiliary Catboat

MANY of the readers of YACHTING will recall the V-bottom type of boats from designs by Mr. C. H. Dodd of Boston that appeared here several years ago, and will therefore be interested in the latest boat from this same designer of a type that has more room in it for its size than a boat of any other model. This husky little packet is only 20 feet long over all, 18 feet 4 inches on the waterline, 8 feet 6 inches beam, and 2 feet 8 inches draft without board, with a sail area of 400 square feet, yet she has a cabin with 4 feet 5 inches headroom, that provides excellent accommodations for two people. The boat is of the usual V-bottom type, easy to construct and at the same time a good sea boat. The stem is rounded, giving a forward overhang that allows just enough room to stand forward of the mast comfortably when handling the anchor. The power shown is a 5-horsepower single-cylinder heavy duty motor, turning a Thompson feathering propeller, which will give the boat a speed of 5 knots in smooth water without in any way affecting her sailing qualities. The engine is installed under the cockpit floor, and there is no bridge deck to shorten the standing room; instead it is covered with a removable box hatch so that the engine can be easily reached. The cockpit is 6 feet 5 inches long by 7 feet wide, with a seat across the after end under which is a 25-gallon fuel tank and a locker for deck bucket, etc., while there are side seats, which are hinged so that they can be dropped out of the way. The sides of the boat are carried up to form a cabin after the style of the so-called raised deck power boats, and this gives great additional space below. The companionway is on the port side of the centerboard trunk, with an ice chest on one side and a dish locker and stove space on the other. The transoms are arranged with slats to make them more comfortable as beds, while forward there is a large clothes locker with 4 feet of headroom, and lighted by hinged ports and also by a hatch over the forward end of the cabin. Raised deck construction is to be recommended on account of its strength and simplicity, while it gives at the same time fine deck room on which to work. The sail plan, while moderate, is enough to give her a good turn of speed in a breeze.

The ballast is outside and consists of a cast-iron shoe weighing 780 pounds. The rudder is hung entirely outboard and is large, after the style of catboats. It is handled by a wheel, principally to save space in the cockpit. The matter of a feathering propeller is an item that should always be given careful consideration in boats with auxiliary power. The centerboard has a hinged table each side, and there is a small knockabout toilet in the forward end of the cabin.







The Taft Cup Winner, Old Sam

OLD SAM

THE design of the little 16-foot waterline catboat, Old Sam, which we publish herewith, is interesting, as the little boat, designed three years ago by Bowes & Mower of Philadelphia, has this season won for the third time the series of races for the President Taft Cup at Toledo, Ohio, thus gaining permanent ownership of the trophy. In the first year she was one of a fleet of about twenty boats built to race for the Cup, and each succeeding year new boats have been built for the purpose of beating her, but so far they have not been successful.

The rule under which these boats are designed is a rather unusual one, as the measurement is length overall plus extreme breadth divided by two, giving the racing measurement, which must not exceed fifteen feet. The overall length may not exceed 22 feet and the sail area may not exceed 18 square feet for each foot of rating measurement. This forces the designer to the top limit of the class in order to get the full allowance of sail, so that the boats are made just under 22 feet on deck and given 8 feet of extreme breadth on deck. The maximum sail area is only 270 square feet, and in order to get a boat that will not be too powerful for the sail area allowed the bilges are made very slack. This gives a narrow boat on the waterline, so that she is good in light weather, and the flaring sides give her stability in strong breezes.

A large measure of Old Sam's success must be credited to her owner, who has kept her in the very best possible racing trim, and she has been handled with great skill. In regard to her racing record for the present year, Mr. King, who sailed her, writes:

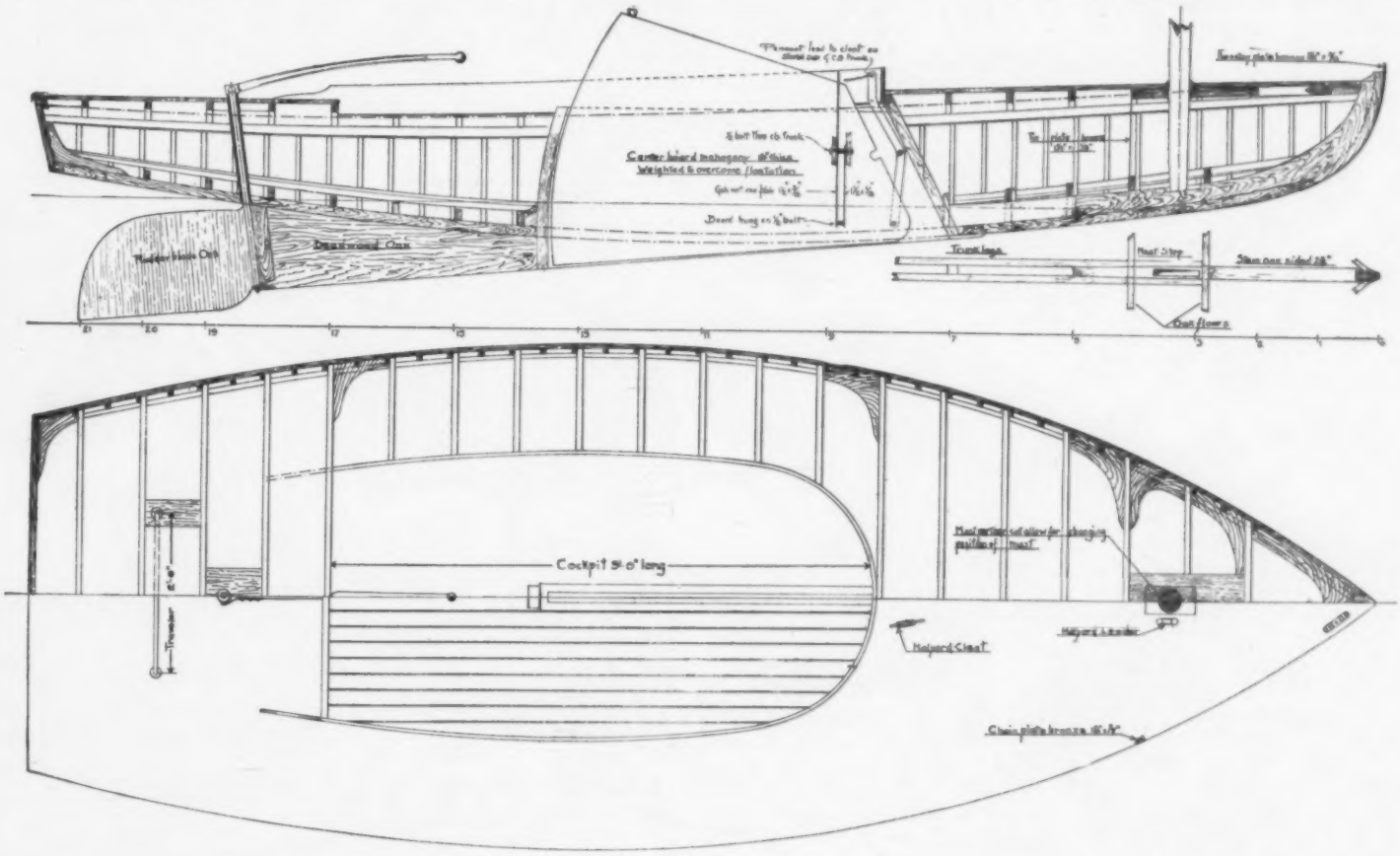
"In reply to your recent letter and inquiry about Old Sam and her record, I will endeavor to give you what I can.

She was designed by your firm; built by Peck & May, of Toledo, in 1911; owned by Commodore S. O. Richardson, and sailed in all her races by the writer, except when Mr. Richardson sailed a match race with Mr. Marshall, with Old Sam winning, and when my wife sailed her in the ladies' races, winning each time.

Season 1911, her first year, Old Sam won 21 firsts, 2 seconds and 1 fifth. Winning Taft Cup, Craig Cup, Toledo Y. C. Championship Cup, Monroe Y. C. Cup and championship. Sweepstake races she finished second.

Season 1912, her second year, Old Sam won 24 firsts and 3 seconds out of 27 starts, winning Taft Cup and so many others that I fail to remember them.

Season 1913, her third year, to date Old Sam has started in 27 runs, winning 23 firsts and 4 seconds. Winning Taft Cup for the third time and all the other events except the sweepstake race in Detroit, finishing second in that. She is a winner in any kind of weather from a drift to a 40-mile blow. We have met as many as 30 boats in a race."



AN ATTRACTIVE HOUSEBOAT, GIVING BUNGALOW EFFECT. A HOUSEBOAT DOES NOT HAVE TO BE A SQUARE, UGLY HOUSE ON A SCOW THAT THE AVERAGE PERSON IMAGINES

Bungalow Boats—A Modernization of the House Boat

By G. D. White

TO many people a houseboat is either an extremely ugly shanty on a scow, or else an immense floating palace owned by some millionaire, and costing $30,000 or up. There are many houseboats that can be listed under either of the above heads, but the vast majority are the property of people of moderate means who use the boats either as permanent dwellings or simply as summer homes; and it is the object of this article to show some of the pleasures of this mode of living.

Houseboats can be divided into two main classes. The first, and most popular class, is composed of boats that have no means of propulsion and are designed to remain in some one spot for a considerable time. These are known as stationary houseboats, and they depend upon a power boat or regular steam tug for motive power. The second class consists of houseboats having either steam or gasolene engines installed, or else are rigged with spars and a suit of sails, so that they are not dependent upon any outside source when they want to change the view or seek new neighbors.

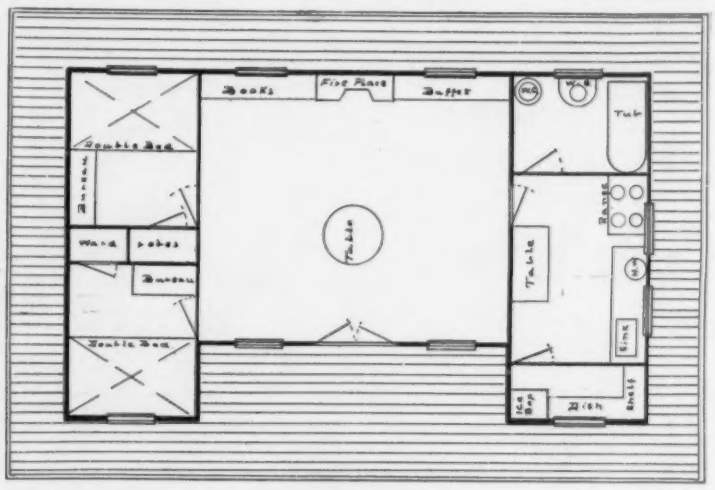
The stationary houseboat is the type that appeals to the largest number of people, partly on account of its lower cost and partly because it is usually built with a wider hull and is consequently more of a real house and less of a boat. This type is usually built so that the hull is at least as wide as the average city lot, although necessarily not as long, and the building of an out-and-out bungalow on the hull is possible.

For many years the designers of houseboats clung to Noah's Ark for a model, and the result was that the finished boat, while comfortable, was far below the land home in beauty. This was wholly unnecessary, as it is just as easy to build a bungalow on a scow as it is to build it on any other foundation, though the construction of the houseboat must be different in several ways, because the water home will have to stand the action of salt or fresh water and also the strains and twists that all boats undergo. It will also be exposed to winds more than the average land home.

The actual cost of a houseboat of the improved bungalow style is slightly greater than the cost of the same size house ashore. This is chiefly due to the cost of the scow, which is more than the cost of excavating and building a foundation for a land home. On the other hand, on the houseboat the plumbing system is much simpler and there is no need for any cess-pool or sewage disposal system. As there is no property to buy with a houseboat the total cost of a water home is, of course, much less than the same house, together with the property, would cost ashore.

Usually the first thing that a person says when houseboating the year round is mentioned, is that it must be frightfully cold in winter. This is a totally wrong impression. A houseboat is warmer in winter than a house ashore. There are several reasons for this. The chief is that the water around the hull protects what is really the foundation of the house from all drafts. This is on the same principle as banking snow around the foundation to keep the house warm. I remember as a boy in New England having to go out and keep snow banked as high up the sides of the house as possible. I spent some of the coldest nights of last winter on a six-room houseboat, that was heated by one small cylinder stove of the type used to heat a single room in the country, and a small four-hole kitchen range. That boat was anchored in a position where it got full force of every wind that blew. In zero weather the temperature inside was never below 75 degrees. The construction of an open fire place is easily arranged, although it is usually desirable to use tiles in places of field stones or other very heavy material.

The use of stoves in place of a furnace, steam or hot water plant is the usual practice owing to the saving of room, and also to the fact that either a large self feeder of the so-called "parlor"



ACCOMMODATION PLAN OF A MODERN BUNGALOW HOUSE BOAT 36 x 24 FEET, OUTSIDE MEASUREMENT

variety, or one of the big round "Station agent" stoves will, with the help of the Shipmate range, satisfactorily heat the average 6 or 8-room houseboat. On larger boats it is desirable to have one of the more pretentious systems of heating.

For auxiliary heating there is nothing that can compare with the portable kerosene oil heater. The old objection that the heater soon exhausts the air in the room is, of course, present, although on a large houseboat of my acquaintance, oil heaters and the kitchen stove were the only source of heat during a long, cold winter. The air was kept pure by having a ventilator open both fore and aft. This practice of thorough ventilation is an excellent one and should be copied in every houseboat. In fact ventilation is one of the most important points of a successful design.

Many persons think that because the majority of sail and power boats leak, that houseboats must suffer from the same defect. Some do; some roofs ashore leak and some cellars are ponds whenever it rains, but this does not mean that every house owner should buy a pump and have it handy for the time when he will have to summon all hands to the pump to keep his house from being floated off its foundation. A properly built houseboat should not need pumping out more than two or three times a season, and then 15 minutes' work should be sufficient. I was shown proof of this on a well-known Long Island Sound boat last summer. After the boat had been in the water about three months, the owner lifted a hatch in the floor of his living room and scratched a match on the inside of the bottom planking of the hull. Those of you who have ever tried to light a match out doors after a rain storm will fully appreciate this. A few grains of sawdust were in the bottom, and he scraped a little up for me to see. They were not even damp. A shaving he found in the bottom burned freely. That boat was properly designed and properly built, and there is no reason except cheap construction or rank inexperience for any other condition.

Now as to the advantages of the life. First and foremost is the fact that the houseboat dweller is absolutely independent. He can tow his home with a launch to whatever port he likes, and when that place loses its novelty, he ups anchor and finds a new one. He can locate in some houseboat colony, or near some yacht or country club, or he can go where he is absolutely isolated from others. For his vacation he can take his home with him for a month's trip up some beautiful river like the Hudson or Connecticut. A launch with an 8 or 10-horsepower engine will tow him at the comfortable rate of from three to five miles an hour.

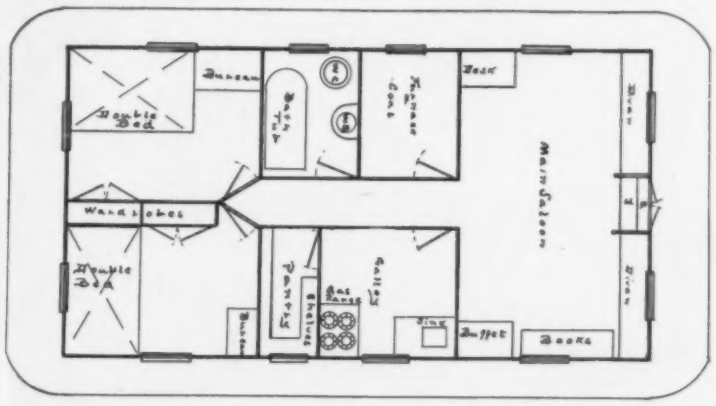
When winter sets in, if he has not tired of the life, he can locate against the shore somewhere so that on cold mornings he will not have to row back and forth to the boat. He simply ties up at some pretty but sheltered spot, within easy access to trains and stores, runs his gangway ashore and settles down.

WINDOW BOXES, AWNINGS, AND A FEW SHRUBS ADD MUCH TO THE BEAUTY OF A HOUSEBOAT

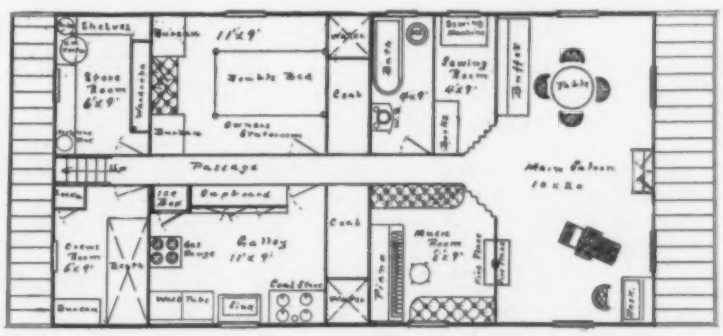
There are two delightful houseboat colonies in upper New York City, both within five minutes of the subway and all kinds of stores, and within 30 minutes' ride of the down-town section. Both of these spots are occupied now by six or eight boats, but there is space for dozens more without the least crowding. One of these colonies is occupied by professional men, who do not live there because of the fact that there is no rent to be paid, but because they love the life. Surely not undesirable neighbors! One family lives aboard for 9 months each year, but during June, July and August they go either to a farm or the seashore, and charter their boat for $500 for the months they are away. In this way they have received all the money that the boat cost originally, and soon they will be living free of rent for nine months a year and getting a gift of $500 for vacation expenses. Even the single taxers can't imagine a cheaper plan.

The accompanying drawings will give some idea of what can be had in the way of simple yet tasteful houseboats at a moderate price. One of these is of the new bungalow type, 36 x 24 feet in outside measurement, with five rooms, while the other two arrangement plans are of the ordinary type, commonly known as "scow" boats with the conventional accommodations of the type. Many variations of these may be had.

As regards the cost of a houseboat, this is, of course, a very elastic figure, depending on many things besides the size. However, the material for about the smallest sized boat that could really be called a houseboat, could be had for about $200. For a really livable boat where the labor as well as the material is included, the price will run anywhere from $1,000 up, depending upon size, finish, etc.



ACCOMMODATION PLAN OF CONVENTIAL OLD STYLE HOUSEBOAT, 36 X 20 FEET



AN ARRANGEMENT OF A SOMEWHAT LARGER HOUSEBOAT OF THE OLD TYPE, 45 X 20 FEET

THE WANDERINGS OF MIN-MO along the Atlantic Coast in the dead of winter, with her subsequent voyaging in South America and up the Orinoco River, which begins in the January YACHTING, make one of the most interesting cruise stories ever published

THE FAMOUS OLD CUTTER BRITTANIA, FORMERLY OWNED BY KING EDWARD VII. SHE WAS REFITTED THIS YEAR AND RACED IN THE HANDICAP CLASS ON THE SOLENT AND SHOWED THAT SHE HAD NOT LOST HER SPEED

Mess Room Talk

Engine in 40-Foot Schooner

BALTIMORE, MD.

I am planning to install an engine in my 40-foot (over all) schooner-rigged boat, and should be very much indebted for information on the following questions: (1) Is it practicable to let the propeller shaft come out under the quarter and to use a folding propeller, and what make? (2) Would you recommend a single 12-horsepower, two sixes, or three fours? My draft is 6 feet and the cockpit where the engine would have to be installed is about 11 or 12 feet in length. (3) Should the resultant deviation of the compass be adjusted by an expert, or could I undertake that myself as an amateur? C. E. S.

1. It is perfectly practicable to let the propeller shaft come through the garboard with the propeller working under the quarter without cutting away the deadwood or stern post for a propeller aperture. This can be best done if the stern post and rudder are fairly well forward of the after point of emersion of waterline, giving the screw space to work between the top or rudder and the overhang of the boat. Of course, the propeller is not far under water, but as in auxiliary power the engine is used nearly always in still water, it is perfectly practicable, though a feathering propeller is almost necessary to prevent excessive drag when the boat is under sail.

The Thompson feathering propeller, made by the Noyes Machine Company, South Portland, Me., and the Gordon reversible propeller of Cleveland, Ohio, both have feathering qualities which would satisfy the demands of such an installation as you describe. I have used the former myself in just the installation you mention and found it gave excellent satisfaction.

2. If you have enough fore-and-aft room, I would recommend a two-cylinder 12-horsepower, rather than a single-cylinder or three-cylinder.

3. If your binnacle is placed anywhere near the engine, you would be troubled with compass deviation which would have to be compensated by adjustment. This can be done by a compass adjuster, who would probably charge you $25 or $30 for doing it; or if you have had any experience, you can do it yourself, as it merely requires the proper placing of magnets which come already prepared. We would advise your reading the article on compass adjustment in the April, May, June and July issues of YACHTING.

Automobile Engine for Motor Boat

NEWARK, N. J.

Can I use a Buda Model "U" motor, 4½-inch bore, 5-inch stroke, developing about 35 horsepower for a motor boat 32 feet long, 8 feet wide and 30 inches draft. I would also like to know if this motor would decrease in horsepower should I use it for the above boat, as the motor is a truck motor. Do you think by putting this motor in such a boat it would probably develop about 30 horsepower and would it lose 5 horsepower? It is a very good motor, weighing about 450 pounds.

What size and pitch of propeller must I use to make a boat of the size mentioned go about 12 miles per hour, and should it be three or two-bladed propeller? E. T.

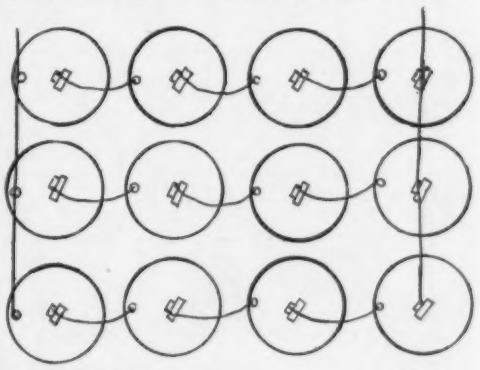
The Buda engine which you speak of is a good machine and will no doubt give you satisfactory service in a motor boat if properly installed, though probably not as good as a regular marine engine.

I believe this engine develops its rated power at from 900 to 1,000 revolutions. This engine speed is too high for a 32-foot boat of the type you mention, and I doubt if the engine would turn up that speed in the boat with any kind of an efficient propeller. You might get 750 revolutions out of her, and if the boat had good lines and was easily driven, this would not be excessive, though, of course, it would cut down your rated power. I doubt if you will get 30 horsepower out of your motor at this speed. You might get 25 to 28, and I think you could get about 12 miles speed out of the outfit if the boat is not too heavy. You would have to get an efficient wheel. It is hard to give the exact dimensions of the proper wheel without knowing more about the boat. I should think that a 20-inch by 28-inch or an 18-inch by 32-inch wheel would be about right for a boat of the dimensions you give. Your wheel should by all means be a three-bladed one.

Wiring for Dry Battery Set

ROCKLAND, ME.

Here is a system of wiring dry batteries that I have used for a long time, and as I find it gives longer life to the cells than any other method of wiring, I am sending in a sketch of it for the benefit of others. I use this battery on a two-cylinder, two-cycle, 12-horsepower motor, and find that with ordinary use, and by keeping the cells dry, that the battery will last about ten months. This method gives 80 amperes and 6 volts. The coil uses ½ ampere.



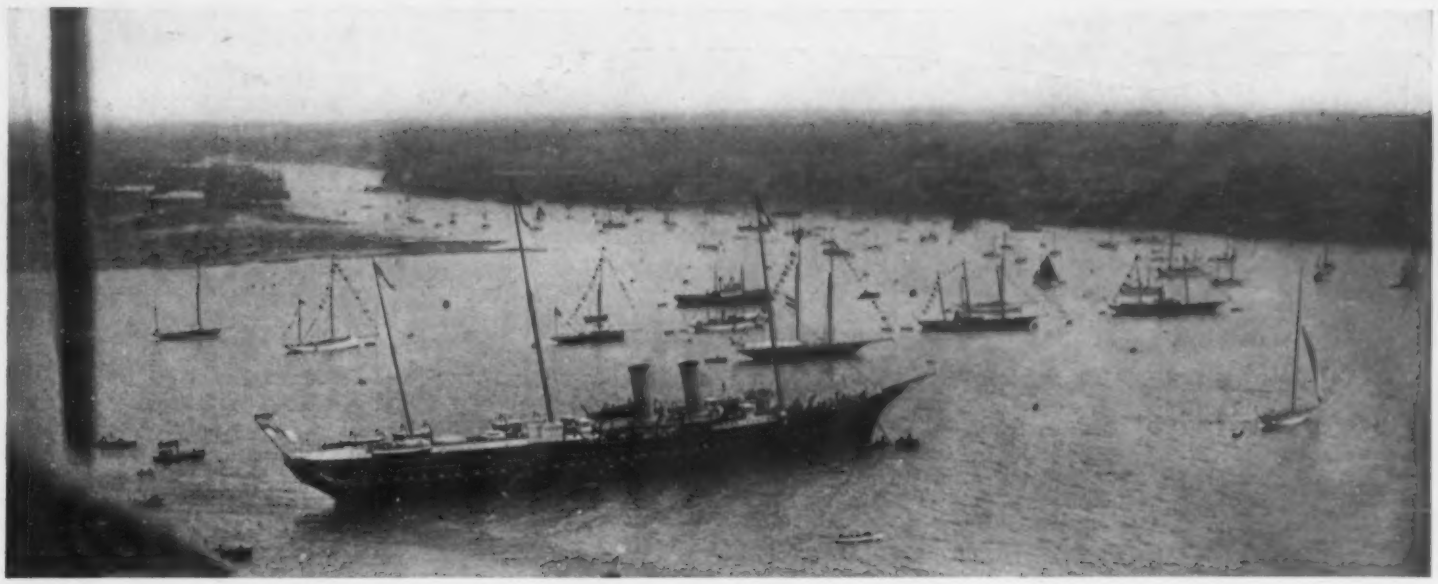
I have used another set for lighting and find it will run four 6-candlepower tungsten lights about 100 hours. Pack the batteries in strong box or on shelf with partitions between the cells, so that they cannot work around. H. S.

Suitable Boat for a Panama Cruise

AUBURN, R. I.

Noting inquiry of J. F. H., of Vancouver, Wash., in September YACHTING relative to boat for trip down the Pacific Coast to Panama Canal, and your reply, I inclose photographs showing a 36-foot yawl designed and built by F. S. Nock for me in 1912, which after two years' use in Narragansett Bay, Long Island and Vineyard Sounds, has given such general satisfaction and has caused so much favorable comment that I believe a boat like this would give the service required for this proposed trip. The plans were published in YACHTING in 1912.

The Squirrel was designed to produce a boat not too large for one person to handle, with accommodations for a man and wife to live on during the summer with comfort, besides room to take several people for short cruises and week-end trips, and so arranged that meals could be prepared without interference. She is 36 feet long overall, 26 feet waterline, 11 feet beam and 5 feet 6 inches draft. The construction of the boat has proved



GENERAL VIEW OF THE ROADS AT COWES, ISLE OF WIGHT, DURING REGATTA WEEK. PHOTOGRAPH WAS TAKEN FROM AN AEROPLANE

substantial enough for continuous outside work. The finish is plain to reduce cost of upkeep.

The boat was designed for auxiliary power and is tanked and bored for same; the tanks are now filled for ballast, as engine has not been installed.

The cabin arrangement is interesting. At the starboard side of companion ladder is the galley with Shipmate coal stove and sink. Under bridge deck is ice box with 200 pounds capacity. By placing galley at after end of cabin, full head room and the greatest amount of ventilation possible were secured, and it is equally handy whether meals are served on deck or in cabin. On port side of companion way is dish locker, full height of cabin; between this and side of boat is full-length berth which is much used by those wishing to sleep when sailing, as it is impossible to roll out. The after cabin is arranged to be shut off from main cabin by curtains, thus forming a stateroom.

The main cabin has two transoms and sufficient floor space to allow passage through without inconvenience to persons sitting on them. Both transoms can be extended and four persons can sleep here, and by dividing with curtain two staterooms can be made. Head room is 6 feet 2 inches throughout.

Next forward is toilet on starboard and clothes locker on port side.

The large amount of storage space available allows for extended cruising and four or five persons could live on board indefinitely without inconvenience.

C. D. R.

Double Centerboard for a Sharpie

NEWPORT, R. I.

I am the owner of a sharpie (New Haven build) which is a very satisfactory sailing craft for even these waters, as the "standing room" is self-bailing and the cabin fairly large; but the centerboard trunk is the drawback, as it takes up so much space in the cabin. The boat is 32 feet overall, 26 feet waterline, draft about 10 inches, and 8 feet beam. I write to ask if anyone has tried bilge keels on this model without altogether destroying the light draft. I have talked with a builder here about taking the area of the centerboard (when down) and dividing the same into two keels, rocker-shaped, but he does not think favorably of it. These keels would increase the draft between 18 or 20 inches. Theoretically it would seem to work, but would it hold this model on the wind as well as the centerboard does now? (It drops about 4 feet below the keel.) If I should substitute the ordinary keel, amidships, on what limit of draft could I get good results, going to windward? There are no craft here of this type to study, as light draft hulls in use have deep fins. I find my sharpie as good in rough water as any of the round bottom boats, and wonderfully stiff because of the triangular sails, in any wind, with but little ballast, some of which is on the certerboard.

D. E. P.

Bilge keels on a boat of this type could be added, I think, but if you have a keel at all, I don't see any advantage in having a keel on each bilge rather than a single keel in the center, and I don't think that a bilge keel would be of any advantage unless each one was deep enough to give the required amount of lateral plane, which would increase the draft to practically the same as one center keel. I do not think that the two bilge keels as you have worked them out would hold the yacht to windward. With a boat of the length you mention, a keel of from 3½ to 4 feet in depth would be necessary to hold the boat up and make her at all efficient in windward work.

You can, however, put in two sliding bilge boards instead of a centerboard, such as is done in the modern racing catboats and in the scow type of boats that are sailed in the inland lakes. This would necessitate a centerboard trunk along each side amidships, in which these lee boards could work, so that the one on the leeward side would be down when the boat was sailing to windward. Of course, such a trunk could not follow the shape of the boat, but it would not take up more than a few inches of room on either side of your cabin and would give you the center free.

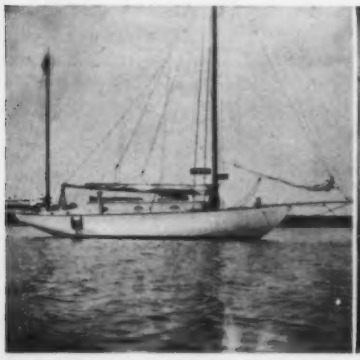
Cement for Ballast

CITY ISLAND, N. Y.

Please advise me if cement run in between the frames of a motor boat makes good ballast. It seems to me that it would be much cheaper than iron or lead where it is desired to bring a boat down to her lines, and would have the advantage of never shifting, no matter how the boat rolled. Is there any reason for not using it?

F. E. F.

There is no reason why you should not use cement for ballast, except that if you run it in it cannot be gotten out without a good deal of labor and time. It makes good ballast; is heavy; fills up all the space; will not shift and, above all, is clean. It fills up the space between frames and floors where dirt usually collects and starts rot, and it does not rust as iron does. It is used very extensively in Gloucester fishing vessels, boiler punchings and concrete being a favorite form of ballast. It will not, of course, prevent leaks, but as good, clean ballast it is all right.

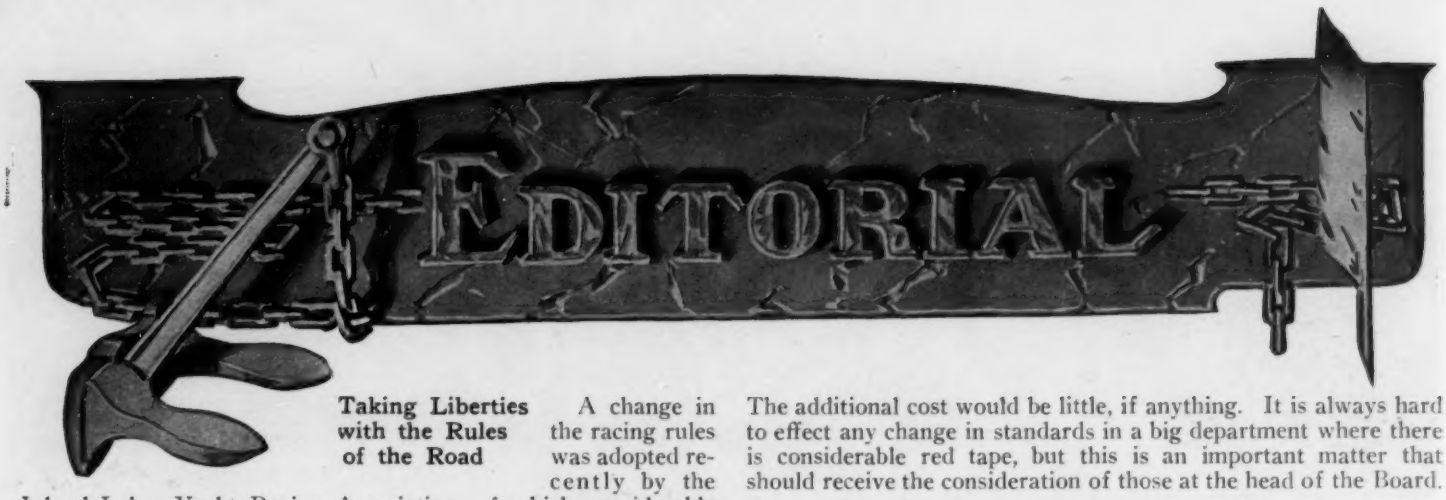


SQUIRREL, AN ABLE 36-FOOTER

MAIN CABIN LOOKING FORWARD

THE HANDY LITTLE GALLEY

AND A COMFORTABLE COCKPIT



Taking Liberties with the Rules of the Road A change in the racing rules was adopted recently by the Inland Lakes Yacht Racing Association, of which considerable can be said in its favor. This deals with the time-honored rule of the road about the boat on the wind having the right of way over one running free. Anyone who has done any sailing knows how difficult it frequently is to handle a boat coming down before the wind carrying a spinnaker, especially if the breeze is strong and there is a following sea making her yaw.

It seemed to the Inlake Lakes sailors that under such conditions it was unfair to make a boat on such a point of sailing give way to one close hauled, where it is easy to let the boat look up or fall off slightly without incurring any danger from jibing. Therefore, the racing rule of the Inland Lakes Association was changed to read "that a boat close hauled had the right of way over one running free unless the latter had spinnaker set, in which case she had the right of way over a boat close hauled."

The present rule governing this point is a survival of the old days of square rigged vessels when a boat running free was under much easier control than one close hauled. In this day of fore and afters, and especially with sloops carrying spinnakers, this is not the case, and frequently a yacht, having rounded a mark and set spinnaker, is at a great disadvantage in having to give way to boats close hauled working up to the stake. The new rule has points to recommend it.

For Improving Navigation Marks As a rule, yachtsmen do not have much occasion to find fault with the work of the Lighthouse Board, which has charge of the placing and maintaining of navigation marks along our coasts and waterways. Occasionally some small harbor used almost exclusively by yachtsmen is not buoyed, but even here the work of the Department is usually satisfactory. There is, however, at least one point in which it seems as though improvement were possible in existing navigation marks.

All of you who have sailed our coasts or rivers have noticed the difficulty of distinguishing a black from a red spar buoy until very close to it. The buoys are the same shape and from a distance, especially if in the face of the sun, it is impossible to distinguish the color. It frequently happens that the buoys are badly weather-worn, due to ice in winter, to being covered with bird lime or to infrequent painting, and many a boat has gone ashore on the wrong side of channel or shoal through ignorance of whether a spar buoy was black or red. Other classes of buoys are easily distinguished, such as cans, nuns, etc., irrespective of color, and there is never any question as to which side to leave one, as soon as its shape is made out.

In Canadian waters all black spar buoys are usually marked by a pine bush fastened to the top, a good distinguishing mark that dispels at once any doubt as to the color of the buoy. Why couldn't some distinguishing form between the black and the red spars be used in this country? A ball or a pointed end on top of either one would be sufficient to distinguish it from the other. The additional cost would be little, if anything. It is always hard to effect any change in standards in a big department where there is considerable red tape, but this is an important matter that should receive the consideration of those at the head of the Board.

The Passing Year As the year 1913 draws to a close, we can look back upon the yachting season with a great deal of satisfaction. It was one of the best and most interesting seasons we have ever had, both in the sailing and the power boat end of the sport, and proved among other things that sailing, instead of retrogressing, is in popular favor more than ever before. Records in the number of starters were broken at most of the leading yacht club regattas. There were more new boats out than have been seen in nearly a decade, and the racing and cruising were attended by no unpleasant controversy or discussion. Protests were mainly conspicuous by their absence and the best of feeling prevailed, especially where any intersectional racing was had. There has been more of this intersectional racing than has been the case in some time, and racing yachtsmen are more and more realizing the advantages and pleasure of occasional competition away from home waters.

On the sailing side, the things that stand out most prominently are the tremendous strength of one-design racing and the hold that such classes have on yachtsmen generally. The new class of nine 50-footers, the biggest one-design class in point of size of the boats that has ever been promoted (barring the "seventies"), was significant, while other classes run from this way down to the little 14-footers.

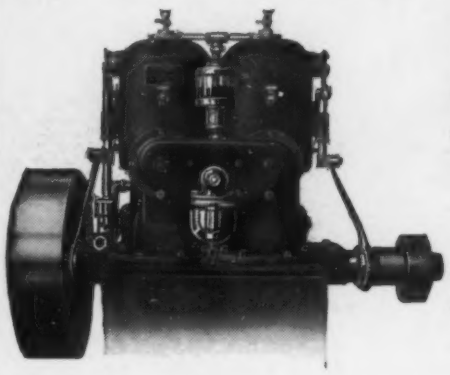
The advent of Josephine in the P class on Long Island Sound will also probably affect considerably the development of this class, and probably some new boats will be forthcoming next year to beat her. The Manhasset Challenge Cup Race in Chicago brought the East and West together on fresh water for the first time in many years, while Narragansett Bay and the Chesapeake also showed more yachting activity than they have for a long time.

The power boat season was one of great interest and new high records for speed were set up, though we did not recover the British International Trophy. There was a great deal of activity in speed boat circles and some of the most interesting and successful meetings in the history of the sport were held on Lakes Erie and Michigan and at other points in the Middle West. The Bermuda Power Boat Race was distinctly successful, three boats making the journey, and instead of interest in such events dying out as was freely predicted a few years ago, there is every prospect of continued activity in ocean racing.

A number of new boats are being built especially for the Bermuda event next year, which show the influence of such races on power boat design. What is needed in power boat affairs is a little better organization and co-operation than has been apparent heretofore. The sport is becoming organized on a better basis, and a few years ought to see a marked advance in this direction.

As we look ahead at 1914 the prospect seems just as bright, and there is little cause to believe that the old cry about an America's Cup Race year being an off yachting year in other respects will be verified in 1914.

In the January number ABANDONED OFF CAPE HORN is a stirring account of the loss of the American deepwater ship Tillie E. Starbuck



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THE WATER FRONT AT MIAMI

DREDGING AND FILLING IN AT MIAMI TO GET A MOTOR BOAT COURSE

Driftwood from Alongshore

Some New Boats for 1914

The keel and frames for a new 154-foot gasolene-propelled yacht have arrived at Lawley's yard and the keel has been laid. This yacht, which will be one of the largest afloat in which gasolene is to be used to furnish power, was designed by Gielow & Orr, of New York, and is to be built for an Ohio man. It should be ready to go into commission toward the last of May or first of June next year, and will cost complete, on a rough estimate, between $250,000 to $300,000. She is to have 20-foot beam and 7-foot draft; is to be of twin-screw type with two 200-horse-power Winton motors. Lawley has also received orders for a 45-foot waterline schooner yacht, a 60-foot power launch and two smaller schooners.

Mr. John G. Alden, of Boston, has an order for a 60-foot flush deck, seagoing launch for Charles A. Warren, of San Pedro, Cal., which will be built in the East and shipped by steamer through the Panama Canal. He is also designing a 27-foot waterline fast-cruising knockabout for Mr. C. W. Hood, of Boston, which will be 41 feet over all, 10 foot 6 inch beam and 4 foot draft. He has an order for a 25-foot waterline cruising yawl for a member of the New York Yacht Club and a 20-foot speed launch for a Mr. E. E. Conway, of Boston. Charles A. Morss is having built at Hodgdon Brothers, East Boothbay, from designs of Tams, Lemoine & Crane, a 32-foot auxiliary sloop, which will replace the 22-footer Typhoon.

The Star Class on Gravesend Bay

The Star class of one-design boats which has been so popular on Long Island Sound the last two years will be boomed on Gravesend Bay next summer, and a number of new boats will be built to the class, while several of the existing boats have changed hands and will be seen next season racing inside of Norton's Point. Among those who will have boats in the class are: Mr. Francis Sweisguth, of the Bensonhurst Yacht Club; Mr. Shipman, of the New York Canoe Club, and several members of the Atlantic Yacht Club. The class is being promoted by Dr. Chas. L. Atkinson, of the Atlantic and Bensonhurst Yacht Clubs.

East Greenwich Yacht Club Elects Officers

The following officers of the East Greenwich (R. I.) Yacht Club for the season of 1913-1914 were elected at the annual meeting on November 3: Commodore, L. W. Dugdale; vice-commodore, L. D. Pierce; rear commodore, Nelson McIntosh; secretary, F. S. Nock; treasurer, Alexander MacCabe; trustees, L. W. Dugdale, H. E. Allen, L. D. Pierce, Nelson McIntosh, F. S. Nock, Alexander MacCabe, George Dickson.

The club is in good condition financially and there are prospects for plenty of racing next season.

Annual Ball of the Metropolitan Yacht Club

The annual ball of the Metropolitan Yacht Club, of Pelham Bay Park, was held at McKinley Square Casino, 169th street and Boston Road, on Saturday evening, November 22, and was very well attended by the East Chester Bay sailors and their friends. It was the occasion also for the distribution of the prizes won in the 1913 regattas, and all those who finished "in the money" during the season received their trophies. All the clubs in the Waterway League of New York were represented at the affair, the flag officers or members of most of them being on hand.

Organizing the Adelphia Yacht Club

The Adelphia Yacht Club was organized during the present season by the boatmen of Fairmount Park, Philadelphia, Pa. More than seventy-five per cent of the most active watermen have enrolled in the club, and it is expected that before the opening of the next season every boatman about the lower dam will have become affiliated with the organization.

The class of men who have been most active in the formation of the club bespeaks for it a brilliant future, together with the assurance that its character will be everything that could be desired. Several members of the faculty of the University of Pennsylvania and its students, who are interested in marine engineering, are members of the club, and with Prof. J. J. Morris, of the Towne Scientific School of the University, who is also commodore and president of the club, have been very active in every division of the organization.

The officers elected to serve until October, 1914, are: Commodore, J. J. Morris; vice-commodore, Geo. R. Bailey; rear commodore, A. B. Blofsen; secretary, M. H. Felty; treasurer, C. Geo. Bastert; measurer, Robt. H. Krewson; fleet captain, C. A. Morrell; fleet surgeon, H. L. Bright. The directors are the officers and six members from the club at large, as follows: S. C. Miller, C. A. Morrell, S. Brenner, W. F. Showalter, R. H. Krewson and E. C. Roth. The race committee—chairman G. S. Parker, and R. S. Carter, A. P. McFarlane, H. M. Alston, S. C. Miller, K. C. Bonney—will have charge of parades, carnivals and all water sports.

Many Boats Change Hands

An unusually active demand for the purchase and charter of yachts of all types is reported by Cox & Stevens at this time. Among recent sales effected by them are the following:

One hundred and twelve foot twin-screw cruising power yacht Taniwha, sold for Irving E. Raymond to Maxwell Wyeth, of Philadelphia.

Ninety-foot twin screw cruising power yacht Vencedor, sold for A. V. de Goicouria to Lawrence Jones, of Louisville, Ky.

Seventy-five-foot twin screw gasolene houseboat Naxos, sold for John G. Christopher, of Jacksonville, Fla., to E. W. Durant, Jr., for use in Florida waters.

Eighty-three-foot auxiliary ketch Normona, sold for William J. Matheson to W. L. Velie for use at Fort Myers, Fla.

Sixty-five-foot gasolene houseboat Temegan, sold for Dr. F. T. Rogers, of Providence, R. I., to W. S. Harris, of Newark, N. J., for use on the east coast of Florida.

Sixty-foot twin screw gasolene cruiser Safari, sold for Julius Prince, of New York to Henry Blakesley, and shipped to Cape Gracios, Nicaragua.

Fifty-five-foot cruiser Vixen, sold for Irving E. Raymond, N. Y. Y. C., to George Lauder Carnegie, of Pittsburg.

Fifty-foot high speed power boat Kalolah, sold for Gas Engine & Power Company and C. L. Seabury Company, to Dwight Partridge, of New York.

Forty-six-foot raised deck cruiser Half Moon, sold for Dr. George W. Van Benchoten, of Providence, to E. J. Clark for service on Lake Michigan.

Forty-five-foot cabin cruiser Wetew, sold for Oliver C. Grinnell, of New York, to John L. Marvin, of Jacksonville, Fla.

Forty-foot raised deck cruiser Ceres, sold for Rev. J. H. Klaren, of Providence, to A. A. Schwartz, of New York.

Thirty-foot hunting cabin cruiser General Bumps II, sold for E. V. Rosemund, of New York, to U. S. Public Service, for use at Quarantine Station, Tampa, Fla.

Thirty-eight-foot raised deck cruiser Lesbia, sold for Joseph Price, of Philadelphia, to H. H. Hagar, of Burlington, Vt.

The following sales have been made through the office of Stanley M. Seaman, yacht broker, 220 Broadway, New York:

The 80-foot twin screw power yacht Igloo, sold for Mr. James K. Stewart, of Chicago, Ill., to Dr. F. T. Rogers, of Providence, R. I.; the 70-foot twin screw power yacht Lady Jane, sold for Mr. John F. O'Rourke, of this city, to Mr. James C. Brown, of Shamokin, Pa.; the 40-foot launch Moonahonis, sold for Mr. B. Thomas Potter, of Providence, R. I., to Mr. Louis de Forest Downer, Mantaloking, N. J.; the 46-foot auxiliary sloop Lounger, sold for Mr. H. W. Dobbins, Jr., to Dr. W. H. Lawrence, Jr., of Summit, N. J.; New York Yacht Club 30-footer Nirvana, ex Ibis, sold for Mr. A. G. Hill to Mr. John A. Ten Eyck, of Bridgeport, Conn.; the auxiliary sloop Shawara, sold for Mr. R. T. Patterson, of Philadelphia, to Mr. John C. Ketcham, of Glen Head, N. Y.

The Hollis Burgess Yacht Agency has sold the 30-foot Lawley built cruising sloop Athlon, owned by Harry H. Walker, of the Eastern Yacht Club, to a prominent member of the Boston Yacht Club; the auxiliary yawl Samoset for Carlton M. Woods, of Brookline, Mass., to Harry P. Willett, of Waldoboro, Me.; the 25-foot Lawley built sloop Carina II, for Leland T. Powers, of Brookline, Mass., to William Foggett, of Princeton, N. J.; the Herreshoff 21-foot raceabout Gadfly, for Russell G. Fessenden,

An Open Letter to Our Readers and Advertisers

Getting right down to hard pan, let us admit from the beginning that "All that glitters is not gold."

Many a coat of paint has made a good *looking* engine out of a bunch of junk.

It is mighty hard frequently for any person, not intimately in touch with the trade, the reputation of the firms in it, their known policies in the manufacturing of their goods, etc., to tell the good from the bad.

Frequently these cheap products are sold at so low a price the gullible buyer can't lose much in money, but on the other hand, the opposite is also frequently true, and the resulting loss material.

And, most serious of all *in every one of these instances*, the sport of motor-boating has been hurt, and the general standing of the manufacturers identified with it impaired.

Thousands of cases of dissatisfaction, due to cheaply manufactured goods not "delivering" (whether sold at a low price or not), occur each year, to the very distinct loss of every interest identified with the sport, excepting the firms who make the sales, and who never expect repeat orders anyway.

YACHTING holds very strongly to the belief that only one kind of goods, whether engines, hulls, boats, accessories, or equipment, deserve support, either from a magazine's editorial pages or the buying public itself, and that is the kind built right—*from the inside*—by competent workmen, from the right material, and sold on *merit*, rather than on a bargain or low price basis.

YACHTING is going to champion the cause of that kind of merchandise during 1914 as it ha never been championed before.

Beginning with the January number, it is going to publish several articles that will prove to any open-minded man that there is only one wise standard to follow in purchasing motor boating supplies—from boats complete down to spark plugs, and that is the YACHTING standard.

These articles are going to make people think on this subject, and they are going to point their moral so clearly that thousands of motor boatists are bound to get a new point of view from them. They are going to realize as never before that intrinsic, honest, *inside* merit, is the one great desideratum, and that exaggerated claims, impossibly low prices, etc., which are so frequently published, inevitably lead to dissatisfaction and distrust.

We believe that in presenting these articles we will be performing a distinctly valuable service to both readers and the legitimate manufacturers, by creating a better understanding between them—to their mutual good—and to YACHTING, because we want the motor boating public to recognize in YACHTING a magazine with the highest possible editorial standards and ideals, one in which the advertising pages (and *this is most important*) will conform strictly to the same standards. **A magazine, in other words, not the biggest in circulation, or the biggest in advertising patronage, but which rather can be looked upon as the "last word" in expressing both in the advertising as well as the editorial pages only such thoughts and statements as are known to be based upon the solid rock-bottom foundation of absolute integrity from every angle.**

We can say to YACHTING readers and their friends, therefore, that during 1914 they ought surely to follow these articles, and also to remember when reading the advertisements in the magazine that the goods behind every one, and the firms behind the goods, are *known* by us to measure up to these standards or their announcements would not be published.

OUTING PUBLISHING COMPANY.

NEW YORK,
November Eighteenth,
Nineteen hundred and thirteen.

Consult YACHTING'S Information Department on any of your problems. Its service is absolutely free.

Of Interest to the Skipper

Fourteen Gray Motors in English Motor Boat Cruise

A good illustration of what a strong hold some of the well-known American-made marine engines have gained in foreign countries was shown recently during the second annual cruise of the Guernsey Bailiwick Motor Boat Association, of Guernsey, Channel Islands, England. This cruise took place on September 11. Thirty-three boats entered, carrying about 250 passengers. Of the thirty-three entries nineteen of the boats were equipped with well-known American-made marine engines; fourteen of these nineteen motors were Grays.

The cruise wound up with a "go-as-you-please" race home. Seven boats equipped with Gray motors took part in the race, and won first, fifth and seventh prizes.

Hyde Propellers Speak for Themselves

The best recommendation for any article is from those who have used it with satisfaction. The following letter, recently received by the Hyde Windlass Company, of Bath, Me., makers of the Hyde propellers, from Stahl-Urban & Company, speaks for itself:

TERRE HAUTE, IND., Sept. 29, 1913.

Hyde Windlass Company, Bath, Me.:

DEAR SIRS:—Last March I purchased one of your 18 by 32 propellers, and wish to give my unsolicited recommendation to anyone using propellers. I have used many styles and makes of propellers, but have never found one anywhere near the equal of yours. It gives me more speed without racing the engine; it runs smoother and has by far more durability.

The Wabash River becomes very shallow during the summer months, and boats wishing to navigate same must plow over or through many sand and gravel bars, which is extremely hard on the propeller. In fact, I have used as many as two and three on one trip of other makes, but not so with yours. Your propeller was put on last spring, and I did not see same until yesterday when I pulled the boat out, and I found it in perfect condition, outside of the edges being worn dull from plowing through sand and gravel.

In conclusion I wish to say that I am for Hyde propellers for once and always, and only wish that more propeller users knew what a good propeller you manufacture. It would mean money in their pockets.

Very truly yours,
(Signed) C. R. STAHL.

Buffaloes in the War Department

The United States War Department has just placed an order for a 20-24 heavy-duty Buffalo engine to be installed in the first of the boats which are to be used in connection with the work of dredging the Mississippi and the Merrimac Rivers, for which a large appropriation was passed by Congress some time ago.

The New York office of the company has just suffered a loss in the death of its manager, Mr. W. S. MacLeod, on October 27.

Mr. MacLeod was 54 years of age, and had been in charge of the New York office of the Buffalo Gasolene Motor Company, 1035 Hudson Terminal Building, 30 Church Street, for the past four years. Previous to that he had acted as Washington agent for the same company and also for the Truscott Boat & Engine Company. Mr. MacLeod was very well known in motor boat circles, both at Washington and New York.

Change in Price and Rating of Wolverines

The Wolverine Motor Company, of Bridgeport, Conn., announce that, effective October 15, their 12-horsepower, two-cylinder, 6½ x 7-inch engine, heretofore rated at 12 horsepower, will now be 12-14, and that their same engine in three-cylinder, heretofore 18, will now be rated at 18-21. Accompanying this change in rating is a reduction of the list price, details of which the Wolverine Company will be glad to tell those interested upon request.

Fire at the Durkee Warehouse

The well-known marine supply house of Chas. D. Durkee & Co., of 2-3 South Street, New York City, was visited by a fire November 15 which nearly destroyed the building. While inconvenienced, Chas. D. Durkee & Co. announce to their many friends and customers that their factory facilities are in no ways impaired, and that all orders can be filled direct from the factory and shipments made promptly at no additional expense to the customer. The New York warehouse will be refitted as soon as possible. In the meantime temporary New York headquarters have been secured at 32-34 Moore Street. All communications addressed to Durkee & Co. at the old or new address will receive prompt attention. In view of their increased business in the last year this company is adding at this time to their factory 5,000 feet of additional floor space.

The New Sterling High-Speed Cruiser and Runabout Engine

The design and construction of the new eight-cylinder, 150-180-horsepower Sterling racing and high-speed cruiser engine is an interesting combination. According to the Sterling Engine Company it was originally designed as a racing engine pure and simple, and as such has been given the severest test that a motor can be put to in the scores of racing boats that have adopted it.

It is extremely simple, and every feature has been scientifically designed to give the greatest amount of power and strength. It is not an experiment, but the culmination of years of labor and study, and combines the latest improvements and advances in the manufacture of marine engines. Although not a heavy engine it is strong and powerful, without loss of responsiveness or flexibility. Its weight is in the parts that bear the stress of hard use; its lightness is in parts that make for speed and action; its strength is in all. A racing engine, as it originally was, it has evolved into an ideal power plant for express cruisers and high-speed runabouts. The exigencies of the racing game have made improvements necessary from time to time, until at last this motor stands as a consistent and economical high-speed motor, that the makers say can absolutely be relied upon, even under the hardest working conditions. With its advent it is now possible to enjoy the exhilarating sport of driving a big, roomy, comfortable cruiser at 24 or 25 miles an hour, or a comfortably equipped 40-foot runabout at 35 miles per hour.

This engine has a bore and stroke of 5½ by 6¾ inches, and weighs 1,400 pounds. The crankshaft is of chrome nickel steel. The cylinders are cast in pairs, of the valve in the head type, and are provided with extra large water jackets. The base is of manganese bronze, and is fitted with extra large hand-hole plates, held by single bolts, making it a simple matter to get at the connecting rod bearings. The inlet valves are nickel steel, and the exhaust valves of special tungsten steel, which does away with the old troubles of warping, pitting and the necessity of regrinding, and is one of the most important improvements in this motor. Lower ends of connecting rods are equipped with bronze shells lined with special bearing metal. These are detachable and interchangeable. The crankshaft end bearings are special bearing metal; intermediate are manganese bronze caps lined with special bearing metal.

Doris, the fastest displacement boat in Canada

A multiple disc clutch of special Sterling design has been built for this engine. The oiling system is of the positive level and dip system in connection with a pump, which insures constant and uniform lubrication to all cylinders, connecting rods and bearings. Between each pit in the base is a space through which water is forced to cool the oil.

This engine has been installed in a number of express cruisers and high-speed runabouts during the past season. Prominent among those who have used them are the following: Mr. F. L. Dunne, of Boston, installed one in his 40-foot runabout Fad, and is obtaining an ordinary, every-day speed of 37 miles per hour; Mr. Fabbri, of Boston, installed two in his 60-foot open runabout, and easily obtains his 30 miles per hour; Commodore H. W. Moore, of Ticonderoga, N. Y., used one in his 40-foot displacement hull, and turns out 33 miles per hour right along without racing his motor; the Matthews Boat Company recently equipped the 60-foot raised-deck cruiser Eleanore with two of these motors, and obtains an average cruising speed of 24 miles per hour; Mr. R. J. Tooke, Montreal, has used this engine for two seasons in his 35-foot open runabout Doris, and obtains 35 miles per hour, this being the fastest displacement boat in Canada; the West Sacramento Company, real estate dealers, Sacramento, Cal., use this engine in their 40-foot express runabout Wilhelmina, to take their prospects to their land along the Sacramento River.

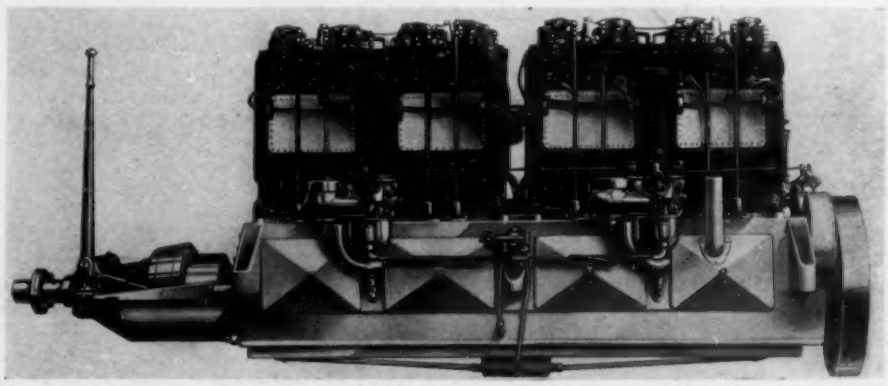
Export Office of Scripps Motor Company

The Scripps Motor Company, of 634 Lincoln avenue, Detroit, Mich., announce that owing to the rapid growth of their foreign business they have opened a special export office in the Whitehall Building, 17 Battery Place, New York City.

Mr. R. V. Warman, who has had charge of this branch of their business since its inception, continues as export manager, and is now located at the new offices.

By this move the company feels that it will now be able to render its foreign friends even better service than in the past in the matter of shipments, while buyers who previously found it difficult to call upon them in Detroit will find the new branch a great convenience.

Incidentally, YACHTING readers may be interested in knowing that there are Scripps motors in operation in practically every country in the world, and with but a few exceptions they operate on kerosene as fuel.



The new 150-180 horsepower high-speed Sterling fast cruiser and racing engine

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ROWE'S WHARF, BOSTON, MASS.
Dealers in Fine Yacht Duck, Rope and Fittings

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SAIL MAKER
Special attention given to Yacht sails of all kinds, canvas work of every description. Estimates cheerfully given.
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PAINTS

We are the largest marine paint manufacturers in the world.
WOOLSEY'S COPPER PAINT
For Wooden boats' bottoms in fresh or salt water. Will stand for one year if properly applied and keep the bottom clear from marine growths. Send for our new marine booklet.
C. A. WOOLSEY PAINT & COLOR CO.
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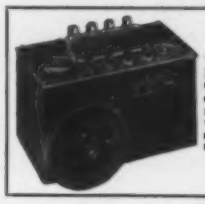

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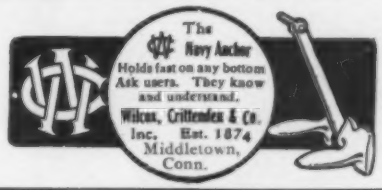
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	Log	Naut. Miles Distance
2:00—Light northerly. Observation for latitude, 42-43 N. Observation for longitude, 66-23 W. 51 M. to Brazil Rock.	305.9	
P. M.		
2:00—Same weather, sea smoothing out	331.2	
4:45—Put on mainsail and big jib after being under try-		
6:55—Raised Seal Island Light 2 sail 47 hours points f'w'd of port beam	347.5	
8:00—Very light wind and smooth sea		
8:30—Raised Cape Sable Light just on port bow		
12:00—Raised S. W. Lodge Automatic		
SEPTEMBER 16		
A. M.		
1:50—Cape Sable Light abeam, distance 4 miles, passed up between Cape and Brazil Rock	368.8	408
3:00—Baccaro Light abeam	374.3	415
3:12—La Tour Light abeam. Wind springing up again	376.5	
4:00—Wind freshening. Smooth sea	379.6	
8:00—Fine, clear morning; light northerly and smooth sea.	408.1	
12:00—Fine, clear and smooth sea; light S. W. breeze	420.3	
4:00—Off Green and Cross Islands	447.1	497
P. M.		
8:00—Working through Sambro ledge; light airs	469.0	
8:55—Passed on by Chebucto Head; hauled in log	472.0	521.5
12:30—Moored off the yacht squadron		529.5

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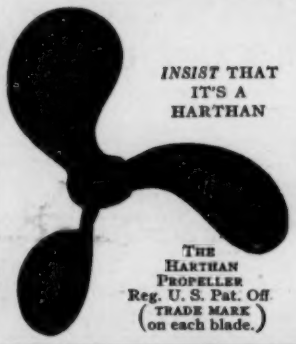

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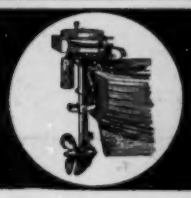

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(Continued from page 292)

was stopped and backed like a small boat. The principle of the Diesel engine is already pretty well known, but may be briefly stated here for the benefit of those who do not already comprehend as to how it differs from the ordinary gasolene and internal-combustion engine. The engine is started on compressed air, which accounts for the necessity of an additional compressed air cylinder. As the engine turns over the air in each cylinder is compressed to a very high degree, approximately 500 pounds per square inch, this air naturally becoming highly heated in the operation. At the completion of the compression stroke a fuel valve in the head of the engine is automatically opened and the fuel oil is injected at a still greater pressure into the compressed air of the cylinder, the heat of the latter being such as to cause instant inflammation of the fuel. After the firing of the charge the exhaust port is uncovered as in regular internal-combustion engines and the cycle is repeated in each cylinder.

The Two Sisters

Continued from page 304)

like cabin, which is all above deck. With the hold full and a deck load she can carry 110,000 feet of lumber. With freights as high as $4 and better a thousand from home ports to places like Boston or New Bedford, a trip of probably a month's duration brings in something in the neighborhood of $450 to $500.

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The Most Southern Yacht Club in the United States

(Continued from page 297)

found in greatest numbers at the southern end of the bay from February to October, though every month in the year is more or less 'bonefish month.' They are taken with a light rod, the best procurable line, and plenty of it, the quickest-acting reel. and sandfleas for bait.

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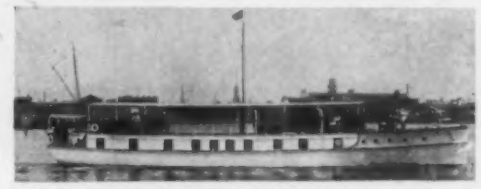

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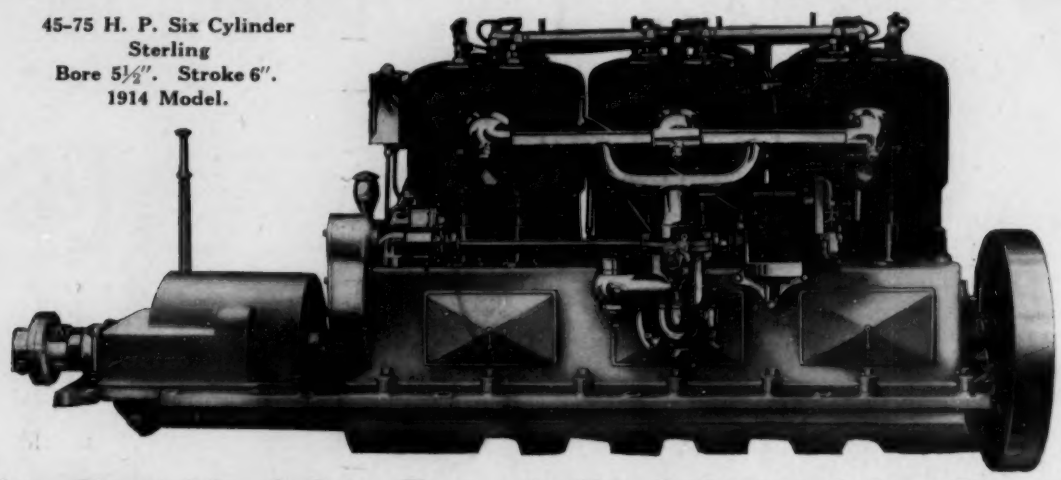

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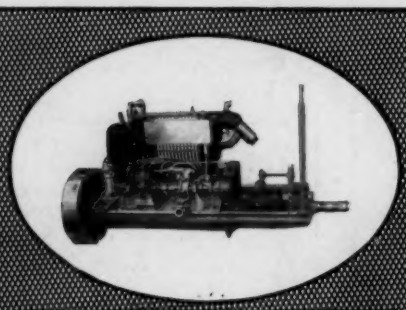

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